



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
Mitchell Bros. Company.
(INCORPORATED.)

Vol. III.

CHICAGO, ILLINOIS, FEBRUARY 15, 1885.

No. 8.

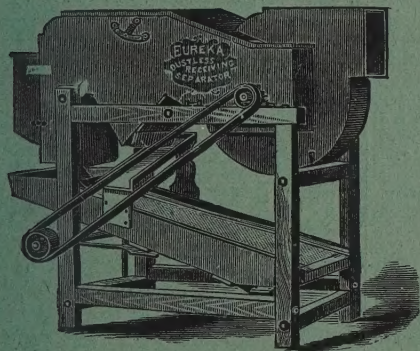
SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

HOWES & EWELL, SILVER CREEK, N. Y.,

—SOLE MANUFACTURERS OF THE—

Eureka Receiving and Warehouse Separators,

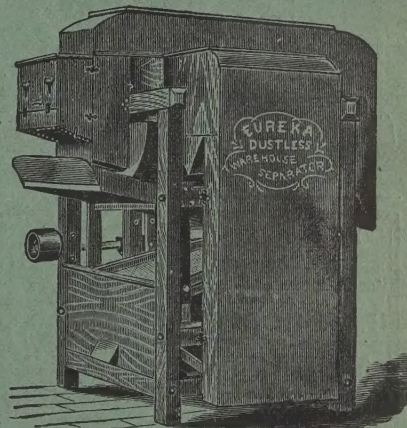
BOTH ENTIRELY DUSTLESS.



Receiving Separator.

—WITH CAPACITIES RANGING FROM—

100 TO 1,000 BUSHELS PER HOUR



Warehouse Separator.

For Further Information Send for Special Circulars

—ADDRESS AS ABOVE.—

CHANDLER-BROWN CO.,

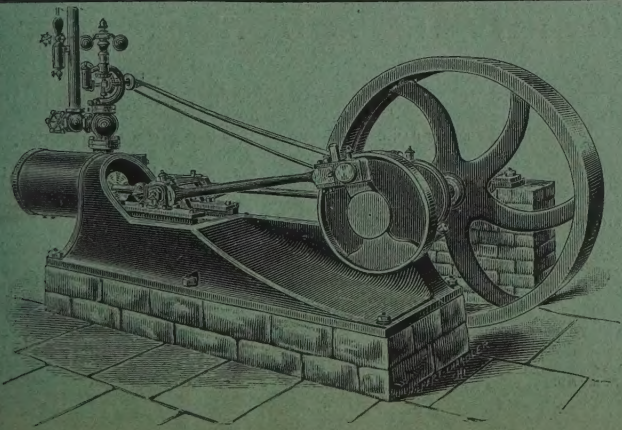
—Established 1863.—

COMMISSION MERCHANTS,

CHICAGO: 177 La Salle Street.

MILWAUKEE: Chamber of Commerce.

CONSIGNMENTS AND CORRESPONDENCE SOLICITED.



Established 1855. — PAID UP CAPITAL, \$80,000.00. — Incorporated 1876

The Frost Mfg. Co., Galesburg, Ill.

—MANUFACTURE—

ENGINES AND BOILERS

Of all Sizes, especially Adapted to **ELEVATORS and MILLS.**

Corn Shellers, Grain Cleaning, Elevator and Mill
MACHINERY.

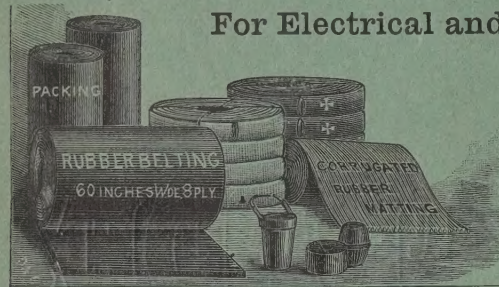
SHAFTING and PULLEYS a Specialty. Belting, Buckets, etc., etc., at as low a price as can be bought from any house East or West, for goods A No. 1 quality. Send us your specifications, and get our best figures by return mail.

RUBBER BELTING, PACKING,

HOSE, TUBING, Etc.,

HARD, RUBBER SHEET, ROD AND TUBE,

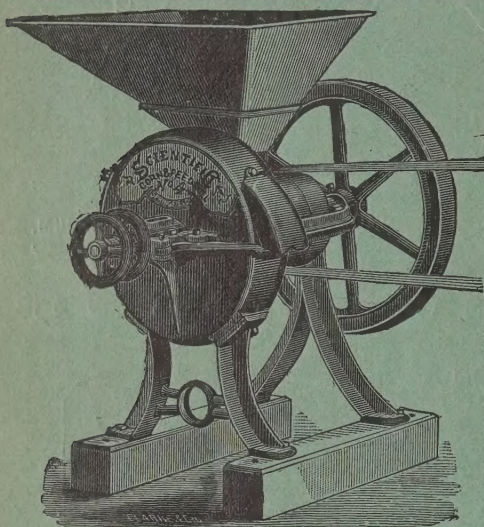
For Electrical and Other Uses.



Leather Belting,
Lace Leather, etc.

Send for Illustrated Catalogue.

The Gutta Percha
and Rubber Mfg. Co.,
159 and 161 Lake St.,
CHICAGO.



THE SCIENTIFIC GRINDING MILL.

Positively the Best Corn and
Cob Mill on Earth.

Grinds perfectly Ear Corn, Shelled
Corn, and all grains. Made in
4 sizes, fully guaranteed. Send for
Illustrated Catalogue to

The Foos Mfg. Co.,
Springfield, O.

GARRY IRON ROOFING CO.,
The Largest Manufacturers of Iron Roofing in the World.

Manufacturers of
ALL KINDS OF
IRON ROOFING
AND
CRIMPED SIDING,
Fire-Proof Doors and
Shutters.

**IRON ORE PAINT
And Cement.**
152 Merwin Street,
CLEVELAND, OHIO.
Send for circulars and
Price List No. 79.

The Cincinnati Corrugating Co., CINCINNATI, OHIO.

SUPERIOR IRON ROOFING!

Siding, Ceiling, Arches, Lath.

Most Economical, Durable and Effective. —SEND FOR OUR—
Illustrated Catalogue.

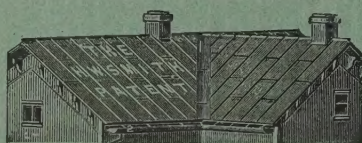
T. C. SNYDER & CO.

—MANUFACTURERS OF—

IRON ROOFING, SIDING AND CEILING,

(The H. W. Smith Patent is the best in use.)

PLAIN,
Corrugated,
CRIMPED,
BEADED,



And Jobbers in
IRON ORE
PAINT,
CEMENT,

And Roofers' and Builders' Papers.

Patent Calamined Iron in Quantities---A New Thing.

Coating is indestructible, will not scale, is soft, solders more strongly, and is superior to Galvanized
Iron or Tin for all purposes. Protected both in body and surface. Circulars,
Price Lists, and Samples mailed at request.

CANTON, OHIO.

G. W. SHERWOOD.

B. SUTHERLAND.

E. HOWARD FITZ.

G. W. SHERWOOD & CO.,

—BUILDERS OF—

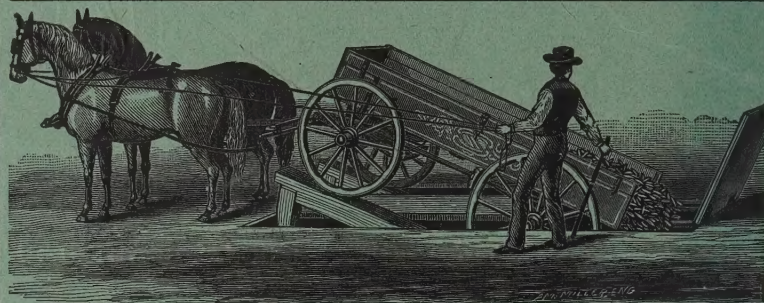
Bridges, Elevators and Railroad Buildings

Pile Driving and Trestle Work,

Bridge, Elevator, Warehouse and Farm Buildings Plans Furnished

ON SHORT NOTICE.

Room 24 Davidson Block,
Corner 4th Avenue and Jackson St., - ST. PAUL, MINN.

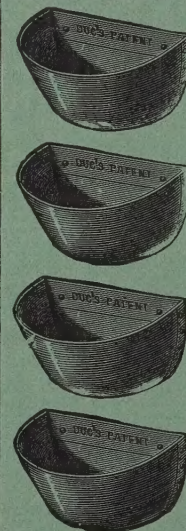


The above cut is a fair representation of the Rail Dump in common use, on which
we are collecting a royalty for past use, and licensing parties to continue to use, and
also put in new Dumps. Our patents on Rail Dumps fully cover this class of Dumps.
Any one using Rail Dumps can readily decide by comparing his Dump with this cut,
whether he infringes or not. We also control patents that cover Platform Dumps.
Our prices are reasonable in settlements for past infringements, and for licenses to
continue to use the Dumps.

Applications for Licenses for using said patented improvements, and for set-
tlements for past infringements should be addressed to

J. M. HARPER, Room 28, Board of Trade Building, PEORIA, ILL.

The "Duc" (STEEL) Elevator Bucket.



The Best Elevator
Bucket Made.

Only two pieces.
No corners to catch.
Only one seam.
Struck out from best
charcoal iron, and
hand riveted.

13 SIZES.
From 3 1/2 to 16 inches, in
two weights, "light" and
"heavy," the former for
use in Flour, Drug and
Spice Mills, and light
work generally, and the
latter for use in Mines,
factories, and heavy
work.

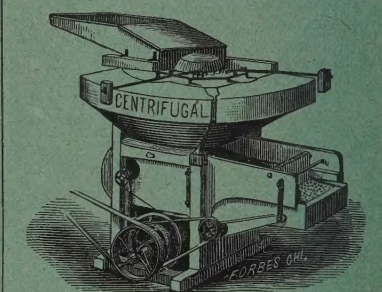
Prices Reduced.
JAN. 1, 1884.

This bucket has been
before the trade for ten
years, and has met with
the unqualified approbation
of the public.

OVER
1,500,000
SOLD.
For circulars address

IRON CLAD MAN'G CO.,
Sole Manufacturers,
22 Cliff St., New York.

SELF-FEEDING CORN SHELLER



AND CLEANER.
PRACTICAL, DURABLE and CHEAP.
For Illustrated Price List address
VANT, COOK & PARKHURST, - CHICAGO.

GENUINE FRENCH BUHR
CORN and FEED MILLS
and POWER CORN SHELLERS.
Cheapest and Best in the
world. Illustrated
circular free.
A. W. Stevens & Son,
Anburn, N. Y.
Mention this paper.

CALDWELL CONVEYORS 30,000 FEET

RIGHT HAND.

RIGHT HAND

LEFT HAND.

LEFT HAND.

CALDWELL CONVEYOR

CARRIED IN STOCK.

4 in., 6 in., 9 in., 12 in., and 16 in.

Warranted not to Injure Flour.

Order from cuts shown as wanted.

Get NEW CATALOGUE
for 1885.

H. W. CALDWELL
46 S. Canal St., Chicago.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
Mitchell Bros. Company.
(INCORPORATED.)

Vol. III.

CHICAGO, ILLINOIS, FEBRUARY 15, 1885.

No. 8.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

AN ENGLISH GRAIN WAREHOUSE.

Slowly but surely, with no uncertain step, Old England follows, *non passibus aequis*, her transatlantic scion in building elevators as well as in her methods and machinery of milling. There is, however, a marked contrast in the work in general of the two nations. Ours is light, but strong, simple, with no unnecessary effort at display, only sufficient output to safely do the work, which it is anticipated will be only for a few years in the rapidly growing range of trade and production, whose demands as to facilities will be fully in accord with our progress. Our old mother builds elevators like castles, solidly, with grand ornamentation, as if they were to remain to the future, either for actual value in use or as an embalment of a memory. It is true that the impulsive youngster moves often all too hastily, with too little care, and then the spilled grain out of some great elevator of more than a million-bushels capacity tells the story of a foolish loss. But our land resources and industries, with our wealth of inventive genius, fostered by the wisest of government regulations in saving litigation and protecting legitimate claims, allows no time for wasted energy, is always pushing on to higher and larger developments.

On this page we present our readers with an illustration of one of these recently built houses, the New Granary at Bristol, Eng., which is considered a fine specimen of ornate architecture applied to the dull routine of commerce. In order to make secure a defective location, a layer, six feet in thickness, of ground brown limestone concrete was spread over the entire site. Upon this platform the external massive walls were raised to the height of 100 feet from the ground, on a foundation 45 feet in width and 95 feet in length, bearing seven stories. The lowest story constitutes one large bonded cellar; a portion of the top story

is used for the engine room; all the rest of the building is devoted to storage, giving a capacity for 95,000 bushels of grain. There are only nine internal supports for the

ample ventilation. The so-called lifts or elevators on the outside, and the external doors on each floor, are in niches at the angles of the building, and thus do not impair the architectural design. The grain is delivered into carts on movable skids, sliding out of the round holes under the string course of the first floor. The cost of the building was \$150,000.



AN ENGLISH GRAIN WAREHOUSE.

granary floors, leaving a large floor space free from pillars. The external walls are faced with hard, Cattybrook brick, and the lower portion of the window openings are ornamented with open patterns in brickwork, of which advantage is taken to give the structure

in the hands of a commission, who, after a thorough hearing, advise the legislative department as to legal remedies. The experience of Kansas has been regarded favorably by older states, as Massachusetts, where the submission

THE GROWTH OF KANSAS.

The recent inaugural of Gov. John A. Martin, of Kansas, gives a graphic picture of the growth of that state since its admission into the Union in 1861, intimately associated with our civil war which was then commenced. Her thirty-one organized counties then are now eighty-two, with thirteen still to be organized. Her population has increased from some 100,000 to over 1,250,000; her cultivated area of a little over 600,000 acres has increased about 9,460,000, and her wheat and corn crops, then respectively about 194,000 and 6,150,000 bushels, are estimated at over 48,000,000 bushels of wheat and nearly 191,000,000 of corn, for the season just closed. Over 4,486 miles of railroad have been constructed where not a mile existed in 1861, and seventy-three of her counties, four of them unorganized, are so traversed.

This rapid growth of the railway system leads the Governor to refer to their immense and increasing power to aid or kill the agricultural interests of the state. The last legislature introduced a law tentative in character which has worked well so far, and has promoted the friendly relations of the two interests. The investigation of cases of complaint was placed

without dispute of the roads there to the commission's arbitration having been noted by the executive, but the Governor thinks the power and sphere of the commission may be now wisely amplified. A reasonable remuneration of the roads is only just, but extortion or dividends on "watered stock," etc., are an injury to all the other industrial interests.

Communicated.

FROM MINNESOTA.

Editor American Elevator and Grain Trade:—Thinking that perhaps you would like to hear from this section of the country, I take the liberty of sending you a few notes on the elevators and grain trade here. We have handled at Minneapolis and Grand Forks, Dak., about 800,000 bushels of wheat since Aug. 1, about 40 per cent. of which was hard, against some 80 per cent. in 1883. So that you will see there has been a great falling off in the grade, which is due mainly to the fact that in the past year the farmers have been inclined to sow the soft variety, and in so doing the wheat has become so badly mixed that unless the seed is changed this coming year there will be but little hard wheat here another season.

The farmers have found some fault with the elevators and railroads, which has been taken up by petty politicians and exaggerated to such an extent that anyone not acquainted with the circumstances would naturally suppose that whenever a farmer drove up to an elevator he need not expect to see either wheat, sacks, team or wagon again. So far as the elevators and the grading of grain are concerned, the kicking is entirely groundless. I have had several years' experience; have bought grain for Chicago and Milwaukee markets, and I claim that the farmers of the Red River country get a better grade and a comparatively better price than those who have to depend on Eastern markets. The freight rates throughout the country are, of course, outrageous, and if our present legislature will remedy this it will be a glorious thing for the country.

Yours truly,
W. A. FREEMIRE.
Agent of Pillsbury & Hulbert Elevator Co., East Grand Forks, Minn.

THE TARIFF AND THE GRAIN MARKETS.

Editor American Elevator and Grain Trade:—In a recent issue of the *Million*, a strong advocate of free trade or low tariff, there are presented some valuable statistics that should be pondered by the American producers and grain dealers in reference to the financial policy of our country and its special influence on our traffic in breadstuffs. The subject, owing to the fact that party lines are not in fact now drawn so as to show what are the views of leading statesmen on this matter that are likely to be acted upon, may be regarded as outside what is ordinarily called "politics," which is very desirable in a fundamental question on which the great desideratum is to attain a policy that may be comparatively permanent and that also may be just to all the industrial interests of the country. The disastrous effects on the steadiness of traffic, and its ability to make far-reaching contracts involving long periods of time, make the liabilities to frequent changes far more disastrous than a policy that is not the wisest if left unchanged.

The facts referred to above are these: Of the total amount of our exports of grain and breadstuffs in the sixty-three years, 1820-83, being nearly \$3,400,000,000 value, the figures representing the first forty, the first ten of high tariff, 1860-70, and the last three years, are nearly identical, being in millions respectively about 620 640, and 661 dollars. This the *Million* used to show the fallacy of the view that high tariff is specially influential in creating and increasing our home market. The writer intensifies this statement by other comparisons: In the last nine years of our high tariff we exported more breadstuffs, etc., than in the preceding fifty-four, the figures in both periods being in the neighborhood of \$1,700,000,000, the latter exceeding the longer period by some \$17,500,000. More than half our exported breadstuffs in these sixty odd years were shipped in the last nine, or in one-seventh of the entire period and during the time of our high protective tariff.

This opens up a discussion too extensive to be entered upon in your columns, while my desire is not to dogmatize but to tentatively call the attention of my fellow-craftsmen to the careful consideration of this vital mat-

ter. In the reasonings of the advocates of any special policy the facts are generally presented isolated, and many important factors of cause are omitted in order to make out a case. During the years above considered, infinitely varied causes of increased production have decreased the labor and time required in creating any given amount of products in an incomparable ratio. While at one time all the labor of our young community was required to supply its own food, a small fraction of our workers now cannot only supply our immensely increased population food, but have an increasing surplus to put on the world's markets; at the same time vast fields of other industries as shipping, the machinery of traffic and transportation, and the manufacture of all the various articles of use in the arts, etc., have gone on until we place the products of our skill and surplus labor in the markets of the world. No terms can express too strongly the value of a "home market," and the facts stated show to whatever causes due, either of native resources or finance, we have gone on infinitely to increase our home market, even while the splendid showing above proves that it could not keep abreast with our increased capacity of production. I think certain propositions may be set down as axiomatic: The home market, for self-evident reasons, should be especially stimulated; the exportation of our necessarily increasing surplus of production over the largest possible demands of our home market should be changed, as fast and as extensively as possible, to the manufactured condition, employing the skill of our own people, increasing them in value and rendering them far more easy and less expensive in shipment than the raw material. In this view I believe the present depression in the world's grain markets and the rapidly increasing foreign competition in raising the raw material will have, in the end, a beneficial effect in enlarging the field of our manufacturing industries. Among these are to be ranked flour, meal, meats, etc., which are as much the results of manufacture as iron tools, or woolen and cotton fabrics. Let us that are engaged in the grain traffic, and on the farms, study this question in its broadest aspects, seeking that tariff policy that shall be permanent, and while giving ample basis for our expenses and credit, compel official economy injurious to no industries, not even if benefiting our own.

Yours respectfully,

DEALER.

A NEW IDEA.

OF IMPORTANCE TO EVERY MAN WHO EMPLOYS A
WEIGHMAN.

We were shown a few days since the model of an improved scale beam and counterpoise which has for its object the detection of errors made by weighmen in recording their weights. As it seems to us to effectually accomplish its purpose, a description of it will no doubt be of interest to our many patrons who employ weighmen.

There is stamped under the figures indicating the weights, on the scale beam, two series of letters one above the other. With the poise at the balancing point, the upper series begins at a point about one inch beyond the left-hand side of the poise—the lower series beginning at a point about an inch beyond the right-hand side of the poise. Attached to the poise is a plate which lies along the face of the beam—covering all the letters in proximity to the poise except one in the upper series to the left of the poise and one in the lower series to the right of the poise. These two letters are exposed through a slit or opening near the ends of the plate attached to the poise so that at whatever weight the poise stands there is exposed a certain combination of two letters which occurs with no other weight on the beam. The counterpoise is arranged on the same principle, having an indexing slide which must be raised before the loose weights can be hung on the poise, and which falls down on top of the weights indicating the figures, and, on either side of the figures at oblique angles from the same, two letters forming a certain combination as on the beam.

Now in addition to the weights which the weighman enters into his weigh-book, he enters, for instance, RXAE, being the letters shown through the slots of the counterpoise and poise. Now by means of a key these letters can be instantly reduced to pounds or bushels. Supposing RXAE to be the corresponding letters for 24250. If the weighman, in entering his weights, should transpose them to read 24520 or 22450, but should have for his corresponding letters RXAE, the fact that RXAE could

occur only with 24250 would not only discover the error, but enable the weighman's employer to rectify the same. As a further proof that his letters were correct and his weights incorrect, by referring to the key or to the scale itself, we should find that 24520 or 22450 would call for corresponding combinations of letters altogether different from RXAE—an error in his letters is discovered in the same manner—as in the event he should write PXOE it would be discovered that there are no such combinations and by setting the poises at his weights the errors would be easily seen. The beam is already in use at the L. S. & M. S. and Union elevators at Toledo, and is considered to be an invaluable device.

Mr. J. A. DeMuth, the inventor, has been in the employ of the L. S. & M. S. Elevators at Toledo for nearly fourteen years, and, realizing the value of a check upon the most important figures in elevator accounts—the weighman's—he has devoted not a little thought to this matter. When we come to realize that the weighman's records at both the shipping point and receiving point are improved copies of important figures—with no means of knowing whether there have been any mistakes made or not, it is hardly to be wondered at that there are so many complaints of shortages at our large elevators. Can 165,000,000 bushels of grain be received in a year by twenty-five or thirty elevators without many errors in handling the figures which go to make up this colossal sum.

Mr. DeMuth's theory that if there were some way by which elevator companies could be satisfied when a claim for shortage is made that their weighman had made the alleged errors, all claims for shortages in such instances would be gladly adjusted. In his opinion those who charge elevator companies with willfully defrauding their patrons know the least about the "true inwardness" of the elevator business. But in alleged shortages, their weighman's affidavit being as trustworthy as the shipper's, dissatisfaction with the elevator company is inevitable.

In the operation of weighing, no sane man can make a mistake, but when a weighman reads the figures upon the beam and enters the same in his book he is just as liable to make mistakes as high salaried book-keepers who make no entries in their books without preserving some means of knowing whether they are right or wrong. Mr. DeMuth's device is double entry book-keeping for the weighman, and will undoubtedly detect errors. For elevators where grain is weighed net he has devised a key by which the check letters are instantly reduced to bushels—so that the footings of the bushels reduced to pounds and balanced with the weights prove at the same time the reduction of pounds to bushels and the weighman's entry of weights. The device can be easily applied to scales already in use by any practical mechanic without tampering in the least with the mechanism of the scale. We hope in our next issue to present an illustrated description of the improved scale-beam which we have no doubt will be of interest to elevator companies, mill owners and all persons interested in correct weights.

THE GRAIN TRADE OF MEMPHIS.

The grain trade of Memphis, Tenn., has become so extensive since the completion of the Kansas City, Springfield & Memphis Railroad, that many prominent grain men are intending to locate in that city. Messrs. Halliday & Phillips, of Cairo, Ill., will build elevators and establish a new barge line for the purpose of shipping grain direct, via New Orleans, to Europe. The Memphis & Charleston and the Louisville & Nashville Roads are unable to furnish cars for the carriage of the grain being distributed now from that point, instead of St. Louis as formerly.

The New York *Produce Exchange Weekly* thus corrects a false impression: There is an impression on the part of some people in this country that no other country grows maize to the extent of supplying any considerable export surplus. Russia, in 1884, exported more maize than in any previous year. The Argentine Republic is increasing her maize production. Roumania and Turkey make a very good showing in the exports of 1884 of 20,266,960 bushels of maize to the United Kingdom, or nearly three million bushels more than Great Britain took from the United States in 1884. If the exports of maize via the St. Lawrence (credited in English statistics to Canada) shall be included in the United States to United Kingdom, the whole will be about equal to the exports from Turkey and the Danube.

THE NEXT WHEAT CROP.

The reports received by S. W. Talmadge, of Milwaukee, Wis., up to Feb. 8, relative to the condition, etc., of the growing wheat crop of the country, are as follows: Commissioner of Agriculture Harrison, of Virginia, says that he has received returns from all sections of the state, showing a decreased wheat acreage of 30 per cent.; the reports indicate that alternate freezing and thawing have destroyed the crop in a large section of the state, especially of the Southwest; the prospect is worse than it has been since 1866. The wheat area in Maryland falls short of last year fully 25 per cent.; no serious damage is reported, but the condition is not flattering.

Missouri returns a decreased acreage of about 10 per cent.; but little damage is reported. The decrease of wheat acreage in Illinois is put at 15 per cent. of last year's. Some damage is reported, but as the ground is now covered with snow no estimate can be made as to condition. The Tennessee Commissioner reports a decrease of acreage there of some 20 per cent., and the damage from changes in weather at 10 per cent., in yield. Kansas has decreased her wheat acreage fully 30 per cent. on last year; some sections report 50 per cent., owing to the low prices of the past season. While it is too early to estimate very accurately, the crop is not considered as up to standard.

Commissioner Bowman, of Kentucky, states that the wheat acreage of the state, as compared with last year's, is decreased 10 to 15 per cent. The winter has been very unfavorable, as in cases reported above, and the damage is large. The returns from North Carolina show a large decrease of wheat area, and heavy complaints are made of winter killing. New York reports some decrease of wheat area, but a favorable outlook for the crop, and no winter killing. Mr. Strider, statistical agent of West Virginia, reports a shortage compared with last year of wheat acreage of 20 per cent.; freezing and thawing have here deeply injured the crop; only a half of the average yield is anticipated.

In Georgia, as in other Southern states, the drouth of last fall compelled a large decrease of wheat acreage; the unfavorable winter weather makes the condition of the growing crop unfavorable. H. H. Young, statistical agent of Minnesota, says that the area sown to spring wheat in the state will probably be decreased, as compared with last year, 10 per cent., or will be not over 2,500,000 acres. The area of wheat in Dakota, if prices remain low, it is thought by agent Baynes, will be less than last year. He says that not more than one-eighth of the crop of Northern Dakota is still held by the farmers, and not over three-eighths in the Southern section. The elevators are kept well cleaned out.

A CHIMERICAL SCHEME.

Prof. W. P. Jenney, a prominent mining engineer of Idaho, on a visit recently to Lincoln, Neb., gave to a *Journal* reporter his scheme for adjusting and regulating freight rates upon a mutually fair basis for the roads and the people; he claims that the roads have reduced this matter to a science. They have agents and subordinates everywhere who learn the details of every man's business, etc., and the question with them is not, What are the just rates? but, How much will business bear without a paralysis? Thus, in a certain sense, the railways own the country. They pool and allot the business among each other. At one time, said the Professor, last year the freight on a ton of ore from one point in Idaho to a smelter at another point was \$25 per ton; the rate on bullion was \$35, although much more easily handled and less expensive to haul.

The remedy proposed is a national law allowing individuals, corporations, and independent transportation companies to own their cars; a sliding scale should be provided for haulage, made compulsory on the roads, and requiring them to transport the cars expeditiously, safely, with no discrimination. The schedule should provide so much per ton per mile of car weight, empty or loaded; a maximum for all distances under 100 miles, and lower rates as distances increased respectively. The charges should be limited to these maximums and take no account of the character of the freight, doing away with a cumbersome and arbitrary classification. A government inspector should inspect every car and fix the maximum weight that it may haul. The basis of rates should be in accordance with the work done, and should fairly remunerate the roads.

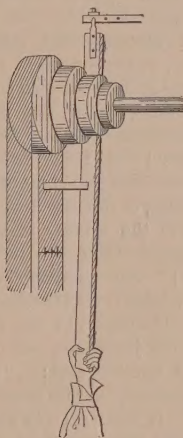
The advantages seem to the Professor obvious and wide-

spread. The companies would find plenty of cars at their disposal, and could readily in case of emergency supply one of their own. Traffic, it is claimed, would thus be unrestricted; there could be no favoritism, and any attempt to pool earnings could be broken up by the shippers. The plan is admittedly crude at present, but its author is sanguine of its practicability and of the realization of its promised results.

There can hardly fail to be noted as a fatal objection to the plan as presented the non recognition of freight classification, involving greater or less values, risks, etc., and as factors in equalizing the necessarily low rates of the heavier and cheaper commodities. Specific legislation as to freight rates is a long way off as yet in the conservatism of our general government; national legislation will be approached as it ought, with slow and judicious steps, each tested by the full inductions of experience.

A BELT SHIFTER.

The annexed drawing, which we copy from *Power*, shows a cheap and safe belt shifter. It is simple, and



its parts, and the method of applying it, need no explanation.

GRAIN RATES AND THE RAILROADS IN KANSAS.

At the Conference of the Kansas State Board of Railway Commissioners and the Kansas Railroad Traffic Managers, held at Topeka, Jan. 5, a full and elaborate statement was presented by the managers containing the statements and replies of the roads to the charges as to exorbitant freight rates on grain, which have already been in the main presented to our readers. In brief they are as follows: As a matter of fact the Kansas roads claim to have conducted their affairs with perfect fairness, steadily lowering their rates as fast as practicable, and are now carrying grain at figures as low as will barely cover expenses.

In the summer of 1884, the present rates were fixed by mutual agreement between the roads and the state commissioners, which are now in vogue; while the tariff in the state is as low as any in the Western states, and as a rule lower. The managers note that there must be, in order to keep the various markets steady and produce no unfair diversions, a uniformity of [through rates among the various lines, and in the successful traffic of the roads this becomes imperative. The managers deny utterly any capitalization of values in plant which were fictitious, or could be styled "watering stock." If the farmer's interest is legitimately calculated on the increase of the value of his land, say from \$1.25 to \$28 per acre, the roads, who are constantly increasing at great expense their facilities, etc., are justly entitled to the same privilege in capitalizing real values.

The claims of the producers are treated under three categories, viz.: As to the actual existence of a distress requiring relief; what would be the result of lower rates on the farmers, and what on the railroads? A history of the crops from 1878 to the present crop inclusive shows that, taking McPherson county as fairly representative, of which the figures are given, the average net profit to the producers in these six years amounted to 386 per cent. on expenditures, counting interests on investments. Or for every \$100 expended by the farmer he had a net profit of \$38.60, and bread enough left over to feed the

country. This estimates interest on lands, not at cost but at \$28 per acre. The wheat growers of Kansas can not then as a class be in distress. Besides, this is substantiated by the public evidence of the liquidation of liens and debts, millions of acres of lands having in the past few years had their mortgages raised, while the Loan and Trust Companies say that 90 per cent. of their loans are being paid up. Individual cases of misfortune and bad management doubtless exist, but as a whole, Kansas farmers are growing rich and secure.

Upon the second point there has much been said, showing that the farmer can derive no benefit from the reduction of rates; the persons who would gain would be the speculative dealers, or if the range was large it would only add to the depression of the markets of the world. Vast reductions have been made in freight rates, including ocean transportation and grain handling, and yet in the peculiar condition of affairs prices have only still more declined. The solidarity of the great transporting interests to the eventual advantage of all wheat-growing sections is the important factor in this problem. By discriminations in favor of one section, which might be temporarily benefited, the great world of production would be injuriously affected and the general interests of transportation and trade become unsettled.

The answer to the last query, as to the effects upon the roads, is that it would be paralyzing and destructive. Bound up in their stocks and bonds are the interests of vast numbers of investors of hard-saved earnings, on which they depend for a living or the comforts needed in sickness or old age. The interests of immense numbers of employes and their families, who have no farm products when thrown out of work to go to for food, are in these roads. From Richmond, Va., the statement comes that recent consolidation of road interests, on account of failure to pay, had thrown 200 men out of employment, and this is but a bagatelle in the multitudes thus situated in these pressing times. Taking the recent inaugural of the Governor of Kansas and the evident correctness of the above reasonings of the managers, it is seen that all hasty legislation on these interlinked interests is to be deprecated; that the roads are in great numbers of cases suffering, with all the other interests of industry, involving vast numbers of the poor and dependent classes; and that in spite of railway rings and admitted wrongs in the past and present, they are in fact subject to the great laws of trade and competition due to the vast number of companies existing mutually jealous, and water-ways extended by their improved and cheapened storage facilities, all assuring the producer that on the whole no long continued wrongs can be perpetrated in the rates on grain to the world's markets.

The local wrongs which are possible in states where there is no competition will doubtless be met by the judicious management through commissions under state control which may impartially learn the merits of both sides of the cases, and meet by wise measures any evils that may result. The judiciary of the country have placed the roads under the liabilities and restrictions of common carriers, which gives the states ample power to meet these wrongs when existing.

With our general government, slow and conservative in its movements, the interstate trade rests. The scandals of railway rings with individual enrichment that allows men with untold millions to buy up legislatures and corporations, inflicting infinite injury on those whose money has been obtained and sunken, and its cure lies there, and the country will shout into the ears of a dull Congress if necessary that by some, not arbitrary and hasty legislation, but assuming extinction of these proofs, must be effected.

During the year just closed, Detroit, according to the report of the Board of Trade, received 11,615,871 bushels of wheat and shipped 8,858,356 bushels. Flour receipts were 122,739 barrels and shipments were 146,742. Receipts of corn were 1,679,582 bushels and shipments were 1,424,140.

Respecting the imports of American corn into the United Kingdom, the United States Consul at Londonderry makes an interesting statement. A report to the State Department sets forth that imports of corn from America at that port have decreased from 67,097 tons, or about 2,388,000 bushels, in 1879, to 18,805 tons, or about 670,000 bushels, in nine months of 1884. Imports from the Black Sea increased in the same time from 2,313 tons, or about 82,000 bushels, to 23,880 tons, or about 850,000 bushels.

Legal Notes.

Carrier—Contract for—Rebate.

A contract made by an association of railway companies through its agent with a shipper to ship and carry a large quantity of grain at a reduced rate, which was five cents on the one hundred pounds less than the customary rates, with the provision that the same should be billed at the regular rates then current, and the freight paid at the latter rates, the difference in the two rates to be forthwith paid back to the shipper, was held by the Supreme Court of Illinois to be valid and binding on the company or companies making the same. —*The Erie & Pacific Despatch vs. Cecil et al.*

Insurance on Warehouse.

This was a suit to recover on a fire policy on a warehouse destroyed by fire. The plaintiff being the owner of warehouses situate on the Pacific Railway, not desiring to be known as the owner of a warehouse on a connecting line, had the policy on the warehouse in question taken out in the name of one Eylers, his book-keeper, and manager of said warehouse. The plaintiff asserted in his reply that the company knew that he was the owner of the insured building. Held, On demurrer to the reply that no oral evidence could be introduced to contradict the terms of a written contract, such as was the policy in which Eylers' name appeared. The plaintiff also asserted that Eylers had assigned his interest in the policy to him. Held, On demurrer, that an insurance policy was not an insurance on a building, but simply an agreement to indemnify the policyholder against loss by the destruction of such building by fire; that Eylers had no interest in said building, therefore, he could assign none. Judgment for defendant. —*Abraham vs. The North American Ins. Co., U. S. C. C., Iowa, Dec. 10, 1884.*

Sale of Grain—Failure to Deliver.

M sold in New Orleans to C ten car loads of Nicaragua hard wheat at 95½ cents; the wheat was in Texas, and was to be delivered July 25. Ten days before the day of delivery M gave C notice that he was unable to get the grain, but C encouraged him to try further. C had arranged to ship the wheat to France July 30. M failed to deliver, and C sued for damages and recovered \$620, the grain being worth the day of delivery \$1.11. The case, Camors vs. Madder, was carried to the Supreme Court of Louisiana, where the judgment was affirmed. Judge Poche, in his opinion, said: "The plaintiff clearly is entitled to recover, and the evidence shows that one of the witnesses, a dealer in grain, stated that about the end of July he had closed a transaction in Nicaragua hard wheat of the first-class for \$1.11. There were no regular market reports for this kind of wheat. We think this testimony affords a very reliable test of the market price at the time of delivery, and as C was entitled to the difference between the purchase price and the market price on the day of delivery, the judgment must be affirmed."

The Rights of the Holder of a Warehouse Receipt Defined.

In the case of Sargent against the Central Warehouse Company, an interesting question was decided as to the negotiability of warehouse receipts. In December, 1881, Montague & Tolman, commission merchants, delivered 125 barrels of flour to the Central Warehouse Company for storage, taking a warehouse receipt in return. The flour was subsequently sold to Sargent, and the receipt assigned to him, together with the inspection certificate showing the flour was in good condition shortly before it was delivered at the warehouse. Some time in June following Sargent examined the flour and discovered that it had been spoiled by being rolled in the mud. He brought suit for its value against the warehouse company. He was beaten on the ground of want of privity between himself and the company, and also because he had failed to make out a case. On appeal Judge Wilson held that the declaration stated a good case, and it was error for a judge, after evidence had been introduced tending to prove the issues in the case, to take it away from the jury and direct a verdict for the defendants. As to the character of the warehouse receipt, it was held that the statute made it a negotiable instrument, and hence not only the title to the property covered by it,

but also any right of action for damages, passed to the assignee by an assignment of the receipt. The receipt was a contract, and the contract was an entirety, and passed as such by assignment. Reversed and remanded.

An Elevator Case.

C sued to recover for the loss of an elevator building and additions. The fire occurred Sept. 20. The notice of loss was sent by telegraph Sept. 20, the proofs of loss were made Dec. 22, and the action was begun Dec. 24. By the terms of the policy the loss was to be forthwith notified to the company, and a particular statement made in writing as soon as may be under oath, and "all losses shall be paid within sixty days after the first meeting of the board of directors or executive committee held subsequent to notice as aforesaid of such loss." Also, "it shall be optional with the company to repair, rebuild," etc, giving notice of such intention within thirty days after the receipt of proofs required. The executive committee met twice in each month. The company defended on two grounds: 1. That it was not liable for the loss of a warehouse within two and a half feet of the elevator, which was fastened to the elevator by twenty strips of board. [This warehouse was used exclusively for storing grain, which was received first into the elevator and then spouted into the warehouse through two spouts, which extended from one building to the other, and the grain was taken from the warehouse by a conveyor running under the warehouse and elevator. This warehouse was not used except for and through the elevator.] 2. That the action was prematurely brought, there being no right of action until sixty days after the meeting of the directors or executive committee subsequent to the service of the proofs of loss. [There was no suggestion that the proofs of loss were not made in time.] The company was defeated, and carried the case (Cargill vs. Millers & Manufacturers' Mutual Insurance Company) to the Supreme Court of Minnesota, where the judgment was affirmed. Judge Dickinson, in the opinion, said: "1. The warehouse served the same purpose, and no other, as a bin in the elevator building. It was used as a part of the elevator, and was so connected with it that, in view especially of this use, it must be considered as having been intended by the parties to be included in the designation 'elevator building and additions.' 2. The notice of the loss, which the insured is required by the policy to give in writing forthwith upon the occurrence of a loss and the statement or proof of loss to be rendered 'as soon as may be' are distinct. The one is essentially a notice, and is so designated in the requirement to notify the secretary; the other, which in the policy is called a statement, is not of the character of a mere notice. In the law of insurance it has come to be known as 'proofs of loss' or preliminary proofs, and is elsewhere in the policy referred to as 'the proofs herein required.' The most natural, if not the necessary, construction of the instrument is to read the words 'notice aforesaid of said loss' as referring to the notice of loss, and not to the proofs of loss. This conclusion is further supported by the principle which requires us to construe liberally in favor of the insured those provisions of the contract made for the benefit of the insurer and expressed in a form deliberately selected by it."

ELEVATOR CHARGES AND THE WATERWAYS.

Mr. M. Depuy, who has been engaged in boating on the Illinois & Michigan Canal for the past twenty-three years, went to Albany, N. Y., on Feb. 6, to aid in urging the matter of enlarging the Erie Canal before the Legislature. It was stated that those having the bill in charge have been promised a unanimous approval by the Senate committee. The elevator interests are stated to have raised a large fund for the defeat of the project. Mr. Depuy has prepared a statement showing how the grain trade is, as he asserts, "bled" by the elevator men:

In Chicago the total charges for transferring 1,000 bushels from a canal boat to a lake vessel are \$7.75, including \$5 elevator charges, \$2 for unloading, and 75 cents for loading. In Buffalo, although wages are no higher than in Chicago, the transfer costs \$14 in all, 87 per cent. more than in Chicago. In New York the elevator charge proper is the same as in Chicago, but there are certain additions which make a total of \$18, an excess of 142¼ per cent. over Chicago. The bill now in

the Legislature intends to restrict the total elevator charges to half a cent a bushel, besides the actual cost of loading and unloading. Depuy claims that by building the Hennepin Canal, enlarging the Erie Canal, and restricting elevator charges, the water transportation of grain to the seacoast will be increased to nearly 300,000,000 bushels, at a cost of less than five cents per bushel between Chicago and New York. He is afraid, however, that the influence of the railroads may defeat the friends of water transportation, unless the farmers of the West take an interest in the matter. He suggests that the Chicago Board of Trade investigate the question and join the movement of the canal-boatmen of New York.

THE CHICAGO OPEN BOARD.

The new Open Board building in this city was briefly described by us at the time of its dedication some months since. This addendum in fact to the Chicago Board of Trade was started with some hesitation in 1877, and incorporated in 1880, when its President was T. M. Baxter; Vice-President, D. S. Mugridge, with a board of directors of prominent business men. Its object was to open the advantages of the methods and security of the larger corporation to those of smaller means, without restriction as to the amount of contract. Its early locations were far from being inviting, being in the Board of Trade alley, and 121 La Salle street; of late it was in the basement of the Exchange. It has met perfectly its designs, and in its new and beautiful structure can look back on its early rough career with some pride.

The new building is located on Pacific avenue, opposite the new Board of Trade temple, with a frontage of 100 feet and a depth of 105 feet. It is six stories, with a handsome face of pressed brick, corniced with brown stone, and ornamented with terra cotta trimmings. The main hall is on the first floor, is 85 by 101 feet, well plastered, and roofed with heavy glass, which extends over the rotunda nearly level with the third balcony floor. The Secretary's office and clearing-house are on the second floor, and there is also a balcony at the southern end of the rotunda, which is often filled by ladies who are interested in the proceedings upon 'Change. Above the glass roof of the main hall is a series of balconies extending completely around the interior of the building, one in each story, upon which the various offices open. The two elevators, which are running from morning until night, ascend to each of these balconies, and render every one of the fourscore offices of the building very accessible. The offices range in size from 12x22 feet to 24x22 feet, and all are connected with the lower floor by speaking-tubes. They are well lighted, and heated by steam, supplied with water and gas, and each one has a stout, capacious vault built in its wall. A convenient club-room for the members is situated at the east side, on the sixth floor; billiard and pool rooms occupy the basement, and other agreeable and engaging features are not lacking. The entire cost of the building was \$150,000, and the ground on which it stands was leased for ninety-nine years of Mr. Albert Keep and family. The structure was completed last spring, and is justly considered one of the ornaments of the city.

The membership fees of the Open Board are \$275, against \$2,200 "up stairs," where the smallest deal must amount to 5,000 bushels, but here is not limited as to the minimum. It is said that the same integrity and business efficiency are shown as on the regular Board. The methods of trading are essentially the same, and there is a reciprocity of good feeling between the two Boards. A number of leading firms belong to both. Each firm is entitled to one clerk's ticket, and pays \$5 per month for a second. The Open Board entered upon the Clearing House System two years in advance of its elder brother. The readiness with which its bonds were taken and funds secured are evidence of the high value accorded it; and the scene in the settling room every morning at 9 A. M. shows the extent of the dealings daily carried on. The officers for the year 1884 were: W. D. French, President; E. J. Noble, Vice-President; Alonzo Eaton, Secretary; L. J. Lamson, Treasurer; Messrs. Lamson, Gray, Powers, Lee, Harmon, Woodbury, Adams, and E. M. Cowles, Directors. There are committees on finance, membership, rooms, rules, building, clearing-house, arbitration, appeals, etc.

A few days ago there was not a bushel of No. 2 rye in store at St. Louis.

ELEVATOR "E" AT DULUTH.

An illustrated description was given in our last issue of one of the two new elevators of the Lake Superior Elevator Co. at Duluth, viz: Elevator "D." Its companion, Elevator "E," is equally worthy of notice as they are built on the same principles, alike in many of their details. The latter is built on a strip of land running out of Rice's Point, bought for the sum of \$6,000. The house is 84x192 feet in ground plan and of the same height as D. It is supported on 136 stone piers built on 12 piles each. The machinery in the house is the same as in D, except as to quantity. It has five receiving and five shipping elevators, five cleaners, 10 700-bushel scales, four automatic car loaders, and five Duplex steam shovels. The machinery is propelled by an Edw. P. Allis, Milwaukee, Reynolds-Corliss Engine of 34-inch stroke and 36-inch diameter of cylinder. It has two steel boilers 6x16 feet. The chimney is the same height as that at D, with six inches smaller diameter. This house has also been built with extra large cleaner shafting so that the conveyor belts to a storage house may be run by it. Such a house, when built, will probably be of 1,000,000 bushels capacity.

The elevator itself is of 800,000 bushels capacity, but the machinery so far surpasses expectations that it is quite probable that an addition will soon be built capable of holding 200,000 bushels and having two shipping and two receiving elevators. The arrangements for protection against fire are as complete as those described in Elevator "D," a Duplex pump with steam cylinders 10x12 inches, and water cylinders 7x10 inches has a five inch main running into the house with three outlets each on the lower bin, scale and shaft floors. Hose is attached ready for instant use. This house can receive 30 cars per hour and ship 30,000 bushels in the same time. Total cost of the house, exclusive of site, has been \$160,000. The greatest care has been taken by the builders to make both houses models in every respect, and they have succeeded. All the parts are perfect even to the smallest detail. J. T. Moulton & Son, of Chicago, who, as stated, were the architects and builders of Elevator "D," also designed and built this one.

THE OTHER SIDE OF THE RAILROAD QUESTION.

The Chicago *Inter-Ocean* in a recent issue treats the subject of railway transportation quite vigorously from the standpoint of the roads. After referring to the immeasurable importance of these facilities of communication and trade to every resident of the country, by opening up our vast resources of production and bringing the fruits into the world's markets, the fact is stated that the lowest prices for wheat in the Chicago market were in 1855-8 antedating the era of railroads. In those days wheat was brought in by every pristine method of conveyance over common roadways at a great expense of time, labor, etc., and was sold at from 40 to 55 cents per bushel. The earlier rates of the roads were much higher than they have become in the light of experience, checked by competition. Had they remained the same even during the last decade the receipts of the Western roads would have been increased many million dollars. There has been a steady decrease in the freight rates charged by the roads, who cannot make arbitrary and extortionate charges. This decrease has gone on when the prices of products were advancing, showing that the roads do not, as charged, tax the commodity all that it will bear.

In times of depression the roads are charged by the masses with extortion, no allowance being made for the obligation they must at all times meet in the fixed expenses, such as interest on bonds, etc.; no legislation could be wise enough to fix rates without doing injustice to the interests of large numbers. The interests of the roads are in fact reciprocally related to those of the farmers, and the former must desire the highest prosperity and production that is possible to keep their cars running, and have no plant lying idle, only requiring interest on investment. The best interests of the country, says the writer, are averse to a farther decrease of freight rates. A tabular statement is given, showing the aggregate tonnage moved per mile, with rates per ton, in the ten years of 1874-83, and the annual reduction. The rate per ton per mile fell in that period from 2.12 to 1.26 cents; the reduction in the year 1883, as compared with 1873 was over \$54,000,000, and the aggregate reduction in the ten years amounted to about \$263,000,000;

the total reduction in passenger rates in the same period was about \$45,000,000.

In the depression of the past six months, while the price of labor has remained the same, and the roads are obliged to keep up their expenses in the face of lessened trade, the farmers have been largely able to hold their grain for higher prices. Wages, says the writer, are as high now as in the inflated period of 1880, and form 65 per cent. of the railway expenses. Everything that enters into expense is about the same as in 1873, while freight rates, as shown, have declined very greatly. A farther reduction would only add to the vast army of employes now out of work and decrease wages. The facts correctly studied prove, says the *Inter-Ocean*, that the monopoly charge is without foundations as to the management of Western roads. As has been said by noted officials, there are changes constantly occurring, showing apparent inequalities in rates, requiring frequent tariff readjustments; but the roads are trying to fairly meet these new demands of domestic and foreign trade. They are well aware that the only permanent basis upon which the roads can be successfully managed is that of even-handed justice to all interested, subject to the inexorable laws of trade and finance.

GRAIN ELEVATORS IN GERMANY.

[From *Allg. Muehlen and Masch. Ind. Zeitung*.]

An elevator built at Hamburg in 1878 covers an area of 1,600 square meters; of this two-thirds are taken up by the elevator proper, and the other third by a common storage house. Owing to the swampy nature of the soil, great care and large expenses were necessary to prepare a foundation strong enough for the purpose. Piles, driven down as close as possible to each other, were cut off evenly at the low-water mark, and then covered by a layer of concrete almost seven feet thick. The elevator was built on the American pattern, with wooden bins fastened on the most approved principle. All the well-known appliances for weighing, distribution to the bins, transferring of the grain from vessels into cars or wagons, in fact all the machinery tried and approved of for so many years in America, was incorporated into this elevator at Hamburg, thus reducing the manual labor necessary for its successful operation, to a minimum. Of course the necessity for handling the immense quantities of grain gives rise to correspondingly larger elevators in America, but this one in Hamburg was considered large enough for the trade by having a capacity of 70 tons per hour.

While the storage of grain in elevator bins is looked upon as harmless in America, and although this fact has been known to German millers for the past ten years, it has nevertheless been the cause of constant struggles and discussions in the German grain trade. It is said that bin storage makes the grain moldy, because it does not admit the air; but even if free ventilation helps largely to retain the grain in good condition, the main point to be considered is that it should be thoroughly dry before storing it. Well-dried grain can be kept in bins for years without any harm whatever to its quality. Grain dried on the open field is kept in Russia, without any further care, in bags during the whole winter. Our storage rooms utilize the same principle on the different floors, where the grain is overturned until thoroughly dried. Although a large amount of space is saved in such a manner, as compared to drying in the field, it yet represents a waste as compared with bin storage, where all the space is utilized and machinery can be applied. In seaports, where real estate is high in price, the question of space will always be an important factor for the consideration of warehouse builders.

In spite of all these advantages, the elevator in Hamburg has been unable to gain the necessary support. Of course those trades directly interested in the handling of the grain have instituted the most decided opposition. It was said that the grain inclosed all around in a bin was inaccessible to any inspection by the purchaser; in addition to this the German grain merchants never clean the grain from bran particles or dust, because that would reduce its weight. Americans clean their grain before storing it, and look upon it as an improvement of their product, while the German grain dealers would complain about the removal of such impurities as an unnecessary waste; in addition to this, the fact that such cleaning allows of a better distinction between healthy and rusty kernels tells against the adoption of this measure in Germany.

In this way the grain dealers had such a long list of

complaints against the bin storage of grain, that the owners of the elevator were unable to pay the expenses on their capital invested, and were forced to comply with the universal demand clamoring for a change of the elevator into the ordinary storehouse, which is now in course of construction, utilizing as much as possible of the material originally employed in the building of the elevator.

Such is the state of affairs in Hamburg. Nevertheless, it is simply a question of time to see the bin storage plan adopted, and especially in those cities where a very large amount of grain has to be handled regularly, the German prejudice will succumb first.

The Trade.

The Hill Grain Scale is among the interesting grain trade exhibits made at New Orleans.

The Nordyke & Marmon Co., of Indianapolis, Ind., have a very complete exhibit at the World's Exposition, New Orleans.

The Simpson & Gault Mfg. Co. of Cincinnati, Ohio, have an exhibit at New Orleans which is attracting much attention from millers and grain men.

T. C. Snyder & Co., Canton, Ohio, report their trade as 50 per cent. greater than in any preceding year. Prices were low, but profits better. Stocks of merchandise now are low, the financial scare is abating, and times will gradually improve.

Messrs. Howes & Ewell, of Silver Creek, N. Y., have sent us one of their handsome calendars for 1885-6, issued for distribution among millers and grain men. Any of those who have not received one of these calendars, or who may wish an extra one, can obtain the same by dropping a note to Messrs. Howes & Ewell.

Messrs. Edward P. Allis & Co., of Milwaukee, Wis., have placed on our table a neatly bound copy of their new illustrated catalogue. It embraces in its 238 pages illustrations of their mill and elevator machinery, mill and engine supplies, with the multitude of articles mentioned indexed so as to be readily referred to. This book, for book it is, gives some idea of the magnitude of the great Milwaukee firm's business.

M. Deal & Co., of Bucyrus, Ohio, inform us that their stand at the Exposition in New Orleans, La., is near the center of the main building, letters G-G, Nos. 47 and 48, on the main aisle. They have, with their exhibit, a machine which was exhibited by them at the Centennial Exposition at Philadelphia, in 1876. During February and March H. J. Deal will give the exhibit his special attention, and R. E. Deal and others from the house will be on hand most of the time. The exhibit was put in place by their local agent, H. Dudley Coleman, who will furnish all necessary information.

One of the largest exhibits at New Orleans is that of E. P. Allis & Co., of Milwaukee, Wis.

The January oat deal in St. Louis cost the shorts 32½ cents a bushel to get in out of the wet.

Sneak thieves have stolen many hundred bushels of wheat from cars side-tracked at Duluth.

Maine's receipts of corn via the roads that come into Portland are 10,000 to 15,000 carloads a year.

Toledo signaled the departure of January by getting up a little corner in January corn. The price was forced up 16½ cents.

A change in the system of corn grading in the Philadelphia market has been made. The principal feature of the change is that the grade of corn that has heretofore been known in Philadelphia as sail mixed, and in New York and Chicago as No. 2, is now designated No. 2 mixed, to conform to the grading in other cities. There is also a grade of No. 2 yellow which takes the place of the former sail yellow; and a grade called No. 1 yellow has been established to provide a suitable standard for the receipts of fancy yellow from Delaware and Maryland and a few sections in the West. The grade of rejected has been changed to No. 4.

Where machinery is used, the Drew Oil Cup will save 50 per cent. of oil. Write for circulars. Borden, Selleck & Co., Chicago, Ill.

INTER-STATE COMMERCE.

Mr. Nimmo, the chief of the Bureau of Statistics of the U. S. Treasury Department, has just sent in a partial report relative to interstate commerce, including our transportation relations to Canada and Mexico, which in its facts and suggestions will have an important bearing on the legislation now in progress in Congress on the regulation of our freight carriers, the railways. The specific value of our internal commerce cannot be as absolutely obtained as can the values of our foreign exports and imports, still the facts are sufficient to show the rapid development of our unlimited resources. The following table presents the figures representing our resources in 1850 compared with the census year, 1880:

RESOURCES.	1850.	1880.
Improved land in farms, acres.....	113,032,614	284,771,042
Wheat produced, bushels.....	100,485,944	420,154,500
Corn produced, bushels.....	592,071,104	1,551,066,895
Horses on farms, number.....	4,385,719	10,835,111
Milk cows on farms, number.....	6,385,044	13,125,684
Swine on farms, number.....	30,354,213	43,270,086
Pig iron produced, tons.....	563,755	5,146,972
Coal produced, tons.....	7,358,899	96,000,000
Railroads in operation, miles.....	9,021	121,592
Value of manufactures.....	\$1,019,106,616	\$5,369,579,191

The enormous increase in the value of lands, cereals and manufactures is here evident, and place this country in the lead in both the agricultural and manufacturing industries among the nations of the globe. Among the most important elements of this growth, especially in stimulating the production of grain, etc., are the rapidly and greatly increased transportation facilities, with a decrease in cost and a parallel increase in traffic. The following table gives the compared rates by canal and rail at three points during the fifteen years as noted:

CANALS AND RAILROADS.	1868.	1873.	1883.
New York State Canals.....	.872	.887	
New York Central Railroad.....	2.745	1.573	.91
Pennsylvania Railroad.....	1.906	1.415	.819
N. Y. Lake Erie & Western.....	1.81	1.454	.78
Boston & Albany.....	2.811	1.958	1.19
Philadelphia & Erie.....	1.60	1.135	.68
Lake Shore & Michigan Southern.....	2.336	1.335	.728
Michigan Central.....	2.45	1.891	.83
Chicago, Burlington & Quincy.....	3.248	1.921	
Chicago & Northwestern.....	3.168	2.351	1.42
Chicago, Milwaukee & St. Paul.....		2.50	1.39
St. Louis, Iron Mountain & Southern.....			1.56
Chicago, Rock Island & Pacific.....		2.29	1.17
Illinois Central.....		2.20	1.43
Chicago & Alton.....			1.13
Pittsburg, Ft. Wayne & Chicago.....		1.41	.79
Aggregate on canals and railroads.....	2.295	1.737	
Aggregate on railroads.....	22.453	1.803	1.055

The decline here indicated is from 2.45 to 1.55 cents per ton per mile. This reduction has been forced on the roads by the competition of routes and the intense traffic competition of the centers of trade, and rendered possible by the improved, increased and cheapened facilities of shipping and handling the products.

The agricultural interests of the West as thus affected are seen in the comparison of freight rates by lake, canal and railways from Chicago to New York in the calendar years 1857-83 inclusive, and until Sept. 1, 1884. The profitable shipment of grain from this city to the seaboard dates back only to 1868, and the reductions have been, to 1884, by lake and canal, from 24 5/4 to 6.60 cents per bushel on grain; by lake and rail, from 29 to 9.75 cents; by all rail, from 42.6 to 13 cents. The effect in stimulating agriculture, in which it has been directly felt, is incalculable. In the years compared, the average rate of sack grain from St. Louis to New Orleans fell from 32 to 18 cents per 100 pounds. No clearer illustration of the effects of this reduction can be given than the following table, showing the increasing tonnage by the routes named from 1868 to 1883 inclusive, and 1884 to Sept. 1:

Year.	Lake and canal.	Lake and rail.	All rail.	Year.	Lake and canal.	Lake and rail.	All rail.
1857.....	26.03			1871.....	20.24	25.0	31.0
1858.....	17.03			1872.....	24.50	28.0	31.5
1859.....	18.33			1873.....	19.19	26.9	33.2
1860.....	25.58			1874.....	14.10	16.9	28.7
1861.....	27.05			1875.....	11.43	14.6	21.1
1862.....	27.03			1876.....	9.58	11.8	16.5
1863.....	23.65			1877.....	11.24	15.8	20.3
1864.....	29.11			1878.....	9.15	11.4	17.7
1865.....	23.37			1879.....	11.60	13.3	17.3
1866.....	31.36			1880.....	12.27	15.7	19.7
1867.....	24.11			1881.....	8.19	10.4	14.4
1868.....	24.54	29.0		1882.....	7.89	10.9	14.6
1869.....	23.12	25.0		1883.....	8.40	11.5	16.5
1870.....	17.10	22.0		1884.....	6.60	9.75	13.0

These figures, as the eye compares them, tell their own tale of increase of freights, especially by rail; there was an increase in the fifteen years on the freights of the

three roads named of from about 10,500,000 to some 46,200,000 tons in 1883.

The competition in the traffic of the Pacific coast has been much less than the states east of the Mississippi as is shown by the following table of rates from Chicago to San Francisco in the periods named:

CLASSES.	Freight tariff per 100 lbs. of Dec. 18, 1869.	March 31, 1875.	Jan. 1, 1880.
First.....	\$7.50	\$5.00	\$5.00
Second.....	6.20	4.00	4.00
Third.....	5.20	3.00	3.25
Fourth.....	4.20	2.50	2.50
Special A.....		2.25	2.25
Special B.....		2.00	2.00
Special C.....		1.75	1.75
Special D.....		1.50	1.50

The rates of 1882, the report states, remain unchanged. Mr. Nimmo, in discussing the power of competition to restrain these common carriers from abusing their power, refers to the well-known facts of the combination and so-called poolings of road management, whereby fair competition is destroyed and the control of almost the entire system of roads is placed in the hands of a few monopolists. There was a sort of reason that there should be an agreement among these roads so that freights might be uniform and reliable. The power to injure the great public interests of trade and production is clear, and has numerous illustrations. The immense value of these facilities has, however, hitherto led the public to allow them full liberty in their development, untrammelled by restrictive legislation. But the public solicitude, in times like the present, both here and in Europe, has led to a larger consideration of these matters, and a desire that some wise legislation by our general government should check these growing evils. Such legislation must move cautiously, with no rash, hasty steps, lest greater injury be inflicted on the industrial interests of the country. While the report recognizes the fact that these roads, in their local rates, are in numerous cases beyond the reach of the restraint of competing factors, which, in the main, are being watched and put under control by state legislation, it claims that the above tables show conclusively that the competition of many systems of roads, waterways, and of the market centers, has prevented the roads from enforcing exorbitant freight rates, while the steady and rapid decrease and enlarged facilities for transportation, as seen, have promoted the extension of the commercial relations of the world and given to each center the stimulus and opportunity to improve to the utmost its special advantages. Almost every section of our great country finds a direct outlet for its productions and return of merchandise, etc., through these channels of carriage. The prices of the great seaboard markets of the East and South respond at once to the markets of Europe. The compared rates on these routes are necessarily controlled by the factors of trade, and cannot be arbitrarily made by the roads, which is shown in the fact that the products are taken to each of these ports at relatively uniform rates. After showing this by a comparison with the rates of grain freights from the West to the various seaboard ports, Mr. Nimmo quotes the following words of one of our prominent representatives:

"Experience in the West has demonstrated that a railway cannot determine the route or destination of traffic originating on its line, and certainly has no controlling influence over trade at competitive points. Elements independent of the way of carriage first determine the destination of freight. After that questions as to speed, safety, rates, etc., fix the route. With so many competitive points in the West, the railway companies recognize their true interests in furnishing every facility to the shipper of freight, and do not attempt by possible hindrances or unwise charges to defeat his interests, resulting, as it would, to the injury of the railway companies."

A few days ago a gentleman who had noticed the signs of rats eating corn kept in a large open bin on his place, was much puzzled to account for their getting out, as, from the shape of the bin, while it was an easy matter to get in, getting out seemed impossible. The sides of the bin are very smooth and slope inward, making it out of the question for the rats to climb out. A day or two later, hearing rats in the bin, he made a slight noise and watched to see how they got out. One old rat ran from his hiding place on the outside of the bin to the top of it, and lowered himself down inside until he held on only by his forepaws and head. His friends, seizing his tail, climbed up by this rat ladder until the last one was out, when he drew himself out and scampered off.—*Fayetteville Observer.*

WEAVER ON THE RAILROAD QUESTION.

In the discussion of the bills on inter-state commerce now before the House of Representatives at Washington, Hon. A. J. Weaver, of Iowa, has just made a lengthy speech comparing the two measures referred to in our December issue. Mr. Weaver, of Iowa, fully appreciated the lack of knowledge on these matters by those not connected with the actual management of the roads, and the wisdom of a careful examination of each legislative act in order to avoid all unnecessary and purely ornamental action, and to enact practical and effective laws. The intensity with which legislative measures are being urged upon the legislatures of the different states, which in the absence of all congressional laws have a power to do great harm by hasty and injudicious action, presses the duty in the midst of the widespread complaints of the farmers of the great West upon Congress, of making national regulative measures as to the roads, which are one of the most important factors in our national prosperity. Mr. Weaver, in comparing the merits of the committee bill and the Reagan substitute, stated that the first seven sections of the former covered almost the entire ground of the substitute. Before considering the following measure of the committee's report, viz., the appointment of a board of commissioners, the important differences in the two bills were pointed out. These appear first in the third section, wherein the matter of rebates is treated, the one bill allowing these measures, when done under similar circumstances, the substitute wholly prohibiting them; to which course the speaker gave his unqualified assent. This is the special field of the favoritism of the roads, which investigations as to "similarity" of incidents fail entirely to reach.

The arguments used by the supporters of the rebates present illustrative cases. A shipment is made, say from Chicago to New York, at rates that, the disclosures later show, would have been lessened on a competing line, and a rebate of this difference ought, it is claimed, to be permitted. But the entire law looks to such compulsory notification of rates generally, to be changed only after due notice, as to prevent the possibility of any such contingency without great carelessness. It is also argued that in case of a loss by casualties which make the shipment more or less valueless, rebates might be allowed properly. But this is simply a donation; insurance being the legitimate way for protection against accidents of fire, etc. A case is brought up in illustration, of a custom of giving rebates on staves to American foreign shippers to enable them to meet the competition with the products in the British markets from Norway, etc. But this too is easily computed beforehand, and such general lowering of such freights be notified for the benefit of all. This rebate matter is the door for the great mass of the favoritism of the companies.

The next section makes the same restriction in each bill as to the pooling of earnings. Mr. Weaver is not satisfied that such a measure is wise; the roads should be permitted some safeguards against reckless management and consequent bankruptcy. Legislation does not propose to insure the railways, but to prohibit their taking any unjust advantages of the people in their capacity of common carriers, but the people only want the roads so controlled as to give fair profits on honest investments. And at this point the speaker took occasion to refer to Mr. Long, the Massachusetts manager of the regular bill, as to the small profits made by the roads, as shown in the fact that the sum of \$6,000,000,000 invested in our 125,000 miles of road brought a return of only three per cent. But the old answer is given that the actual cost and present value of these roads is not over one-third this estimate, two-thirds being watered stock. This is the method by which, says Mr. Weaver, Gould and Vanderbilt have become worth more than the whole assessed value of Kansas and Nebraska, with a population on their area of 100,000,000 acres of the richest lands, of two million people.

Section six of the regular bill gives an injured party a reimbursement for his expenses in prosecuting the wrong-doers if successful; but it must be shown that the motive was a willful violation of law. This, as any one familiar with legal procedures knows, would stultify all the value of this offer; the only reasonable method is a reimbursement if damages are allowed. The substitute on the other hand offers a premium for this prosecution by allowing an actual damage verdict of three times the injury incurred. This is a legal

wrong and has been decided by the supreme court of Nebraska as contrary to the principles of equity in relation to individual rights of property which legislatures have no right to set aside. There is no necessity for such unwise and wrongful legislation; let the damages be adjusted on the true principles of law. This matter is treated in considerable detail with illustration from practice in courts.

The fourth section of the Reagan bill includes a matter not mentioned by the committee, viz., the forbidding of discriminations against local points, or *vice versa*, by lower rates on the longer distances for similar transportation. This point has been antagonized very strongly by many members. A fanciful illustration is made by supposing a hill city, en route from Jerusalem to Mt. Jericho, having given liberally of its treasures to secure the road, requires that the carriage be as cheap as that by the stream at the mountain's foot. But the railways are not given to helping cities on hills, or any others, if their own interests can be otherwise better promoted; they pay small attention to towns already built if their own real estate will offer them a profitable location. Mr. Long had suggested that when in a triangular relation to a port one point held the longer side, this road ought to be permitted to reduce its pro rata tax per mile in order to stand the competition. But this is the point in dispute: If the longer route can be run at rates such as the shorter are, then the latter are over-charging, or the long road is making itself by exorbitant local charges; this it is desired should be ended.

The farther claim that the shorter distances included expensive parts often of the routes through tunnels and over bridges, etc., was answered by the fact that these charges were in almost all cases separate affairs, and that the expense of any given part of the road was not the matter directly legislated upon, but simply the discrimination in favor of the longer but inclusive route. The objections to the clause of the substitute bill requiring the posting of the rates, and of changes in ample time for a general knowledge of them to be had by the dealers interested, were answered in the same manner as already stated, while the importance of a foreknowledge of these rates, with no opportunity for hasty changes to all the great interests of trade, is obvious, and must set aside any objections based on mere convenience, or the increase of trouble.

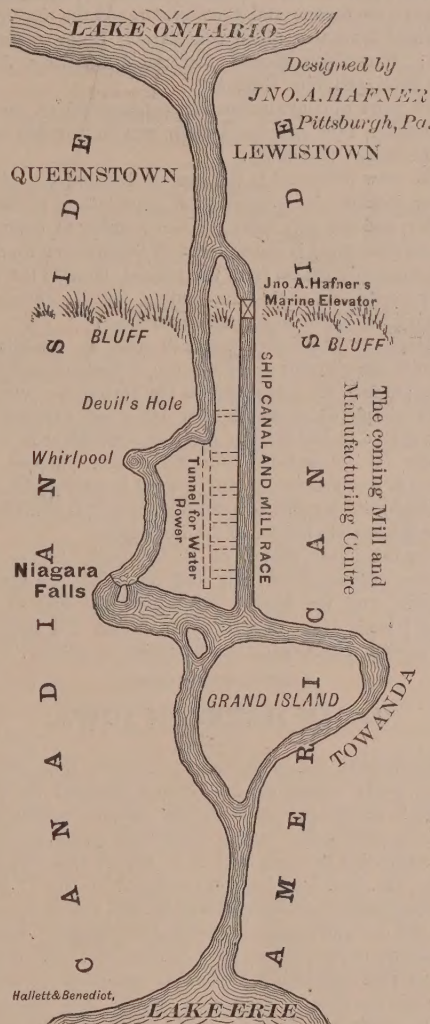
The central feature of the committee's report, as to the creation of a railway commission, was then discussed by the representative under the evident impression that this was a specimen of purely ornamental legislation, of no practical value except in obtaining statistical information at a considerable relative expense. The powers of appointment of a clerk with a defined salary, of accepting passes and generally looking around on the roads, are mentioned as the sum of its power, all ability to correct abuses being reserved. It can entertain complaints when presented through the right legal channels, and can notify the companies of the facts in proper cases which are not clearly defined. They can require the company to appear and answer to the charges made, and on finding cause report to the United States' attorney in that district, in case there has been any violation of the law, within twenty days after the inquiry; and also may notify the company to desist, etc. No real powers seem to be conferred, and the duties, according to Mr. Weaver, are very indefinite. The Reagan substitute was favored by Mr. Weaver, amended as to the damage clause as suggested above.

Chicago elevators contained Saturday evening, Feb. 7, 14,875,550 bushels of wheat, 1,485,394 bushels of corn, 540,056 bushels of oats, 109,384 bushels of rye, and 125,723 bushels of barley. Total, 17,136,107 bushels of all kinds of grain, against 21,601,299 bushels a year ago. During last week our stock increased 238,665 bushels, including an increase of 166,812 bushels of wheat and 12,526 bushels of corn. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 48,090,797 bushels of wheat, 5,311,573 bushels of corn, 2,447,904 bushels of oats, 354,304 bushels of rye, and 1,467,339 bushels of barley. These figures are larger than a week ago by 177,446 in wheat and 344,602 in corn.

The United States Government is using large numbers of the Howe Scales. Borden, Selleck & Co., Agents, Chicago, Ill.

A SHIP CANAL AND MARINE ELEVATOR AT NIAGARA.

Mr. John A. Hafner has projected a Niagara Ship Canal according to plans and observations made by himself, a map of which is given on this page. The most favorable of several routes surveyed is in the neighborhood of Cayuga Creek, emptying into the Niagara about five miles above the Falls. The writer says that the surface



of the land here terminates in a ridge, about 60 feet higher than where it leaves the river. This ridge has an anticlinal axis, extending from northeast to southwest, across the Niagara channel, of which the bluff above Lewistown and Queenstown forming a part is a few feet higher than Lake Michigan and formerly formed a barrier to the flow of water; this was when the upper lakes sought an outlet through a great river nearly in the location of the Illinois River Valley.

To follow this route the canal will have to be cut through at the river level, or raised to the ridge level by locks at great expense. But the sketch shows a plan, designed by Mr. Hafner, which, starting near Schosser's Landing, runs in a nearly straight line to the end of the bluff above Lewistown, which is somewhat less in distance than eight miles, where, by means of a marine elevator of the writer's invention, a ship may be raised or lowered of several thousand tons the required height of 315 feet at one operation and in one hour's time. The vessel could go at full speed from Lake Erie to the bluff, and with the detention of an hour be on a level with Lake Ontario and complete its trip from lake to lake in six or seven hours, and go to the sea via the St. Lawrence, or return in the same way. Mr. Hafner says that he has presented his scheme to the most noted and able engineers, who all admit its feasibility.

Exports from San Francisco from Jan. 1 to 23 inclusive were 109,000 barrels flour and 3,103,946 bushels wheat; while for the whole month of January last year they were 114,885 barrels flour and 891,655 bushels wheat. The exports of wheat so far this month are larger than any previously sent away in any month since November, 1882, with the exception of December, 1884.

Patent.

Issued on January 13, 1885.

CAR STARTER.—Chas. H. Broadwell, New Orleans, La. (No model.) No. 310,556. Filed May 22, 1884.

GRAIN DOOR FOR FREIGHT CARS.—Lafayette J. Mason and Geo. N. Walker, Jr., Peoria, Ill. (No model.) No. 310,600. Filed Aug. 18, 1884.

GRAIN SEPARATOR AND CLEANER.—Edward Sherman, New Pendington, Ind. (No model.) No. 310,734. Filed June 24, 1884.

UNLOADING AND ELEVATING APPARATUS. Matthias J. McNelly, Wilmington, Del. (No model.) No. 310,699. Filed Oct. 21, 1884.

Issued on January 20, 1885.

DRIVE CHAIN.—Charles W. Heald, Moline, Ill. (No model.) No. 310,997. Filed May 16, 1884.

PNEUMATIC ELEVATOR FOR GRAIN.—Robert W. Milbank, New York, N. Y. (No model.) No. 310,905. Filed April 14, 1884.

AUTOMATIC WEIGHING SCALE.—Henry C. Keeler, Ogden, Utah. (No model.) No. 311,010. Filed April 7, 1884.

Issued on January 27, 1885.

BELT.—Maurice Gandy, Liverpool, County of Lancaster, England. (No model.) No. 311,242. Filed June 13, 1884.

ELEVATOR CHAIN.—Christopher W. Levalley, St. Paul, Minn. (No model.) No. 311,334. Filed July 26, 1884.

ELEVATOR.—Christopher W. Levalley, St. Paul, Minn. (No model.) No. 311,335. Filed July 26, 1884.

ELEVATOR.—Christopher W. Levalley, St. Paul, Minn. (No model.) No. 311,336. Filed July 26, 1884.

HORSE POWER.—Samuel Cox, Booneville, Miss. (No model.) No. 311,233. Filed Nov. 22, 1884.

ELEVATOR.—Christopher W. Levalley, St. Paul, Minn. (No model.) No. 311,337. Filed July 26, 1884.

Issued on February 3, 1885.

BALING PRESS.—Albert S. Robinson, Albany, N. Y., assignor of one-half to Abraham Schell, same place. (No model.) No. 311,680. Filed March 24, 1884.

CAR STARTER.—Abraham R. Witmer, Safe Harbor, Pa. (No model.) No. 311,627. Filed Dec. 2, 1884.

ELEVATOR FOR HOISTING AND LOWERING AND AUTOMATICALLY DISCHARGING BARRELS, ETC.—Henry McQuire, Chicago, Ill., assignor to the Link-Belt Machinery Co., same place. (No model.) No. 311,773. Filed Dec. 18, 1884.

FANNING MILL.—Peter M. Faburg and John Ackerman, Roxbury, Wis. (No model.) No. 311,733. Filed July 30, 1884.

DEVICE FOR UNLOADING GRAIN FROM VEHICLES.—J. H. Brown, Chicago, Ill. (No model.) No. 311,468. Filed Oct. 27, 1884.

GRINDING MILL.—Frank Wilson, Easton, Pa., assignor of two-thirds to John L. Wilson and James E. Wilson, both of same place. (No model.) No. 311,626. Filed June 13, 1884.

HORSE POWER MOTOR.—Peter Fisher, Oak Creek, Wis. (No model.) No. 311,737. Filed Sept. 30, 1884.

The wheat crop of Iowa is officially stated at 35,000,000 bushels, the average yield at 13 bushels per acre, and the average price 55 cents per bushel. It has been shown that the cost of raising wheat in Missouri is about 52 cents a bushel, and is probably the same in Iowa. This leaves the Iowa farmer a net profit of 3 cents a bushel on the grain. The cost of raising last year's crop of 35,000,000 bushels was \$18,200,000, and it brought the farmers \$19,250,000—net profit of \$1,105,000.

A movement is on foot for the purpose of building a grain elevator at Lambert's Point, Va., and efforts are being made to interest capitalists of the North in the matter. A number of prominent moneyed men in Philadelphia are inquiring in regard to localities in Virginia for large manufacturing, and \$1,000,000 are said to be open now to such investments. This shows the intimate relation of the grain trade with manufacturing industries, and that attention is being more fully drawn in this direction to the new South, which is full of promise for the future of the whole country.

H. CHISHOLM & CO.'S ELEVATOR AT MEAFORD, ONT.

In no department of the grain trade is the value of recent improvements in machinery more apparent or more extensively utilized than in the construction of the various elevators at the different commercial centers. The demands of the market are, under the wisest manipulation, extremely unequal and difficult to calculate. At times it may be required to store grain in large quantities and for a considerable period; again the market demands may be urgent, and require the most expeditious handling of large amounts of grain which human energy alone could not meet. Aside from this, the interest of shippers and dealers in the sharp contest of competing markets requires the utmost care as to cleanliness in handling this grain and keeping absolutely distinct the different grades. These facts are fully exemplified in the construction and machinery of the elevator lately erected by Messrs. H. Chisholm & Co., in Meaford.

The building is 40 feet long and 30 feet wide, and rests on a stone foundation eight feet high. The superstructure is built of planks laid one upon another and spiked firmly together. The grain bins, which are 40 feet high from the ground floor, were carried up at the same time as the walls, making the building strong and thoroughly secure in all its parts. The bins at the lower ends assume the form of hoppers. A cupola on the top of the building makes the total height about 75 feet. The elevating machinery was constructed by the Waterous Engine Works Co., of Brantford, Ont., and is of the latest improved pattern throughout. The celebrated Ewart Link Belting, to which is attached 140 buckets of the celebrated Salem Seamless Pattern, conveys the grain from the receiver to the different spouts as may be required, and has an elevating capacity of 1500 bushels per hour. On the ground floor is placed one of Johnson & Field's Celebrated Dustless Separators, manufactured at Racine, Wis., and undoubtedly one of the best articles of the kind in the market to-day. It is used expressly for cleaning grain, and does its work to perfection. This machine has a cleaning capacity of 340 or 400 bushels per hour, and during the visit of the reporter to the elevator, changed what looked to be a very poor and dirty sample of wheat into what would grade No. 1 or 2. As its name implies, it is dustless while in operation. The receiving scales are of Fairbank's latest improved manufacture, with improved weights which indicate the number of bushels of grain in each draft, and save a considerable amount of calculation on the part of the weighman. On the ground floor is also a wheel and indicator by which the spout into which the conveyor empties may be changed from one bin to another as necessity requires, thus saving the employes a long and tiresome climb to the top of the building every time a change is required. In fact, the elevator is supplied with all the latest improvements and conveniences known in the elevator world, and everything works charming and gives entire satisfaction. The capacity of the building is 40,000 bushels.

The conveniences for shipping grain are also in keeping with other parts of the establishment. The N. R. R. Co. has laid a track from the station yard to the elevator, and the spouts are so arranged as to load two cars at a time, and do it quickly. Grain is shipped from this elevator to the large elevator of the N. & W. R. R. at Toronto, owing to which a large quantity of grain can be handled at Meaford. The shipping capacity of the elevator is about 10,000 bushels, and its receiving capacity 6,000 bushels per day.

The engine house, which is of brick, about 20 feet square, is situated about 30 feet from the main building. The engine was manufactured by Corbett & Sons, Owen Sound, Ont., and is a beautiful piece of mechanism, and works to the entire satisfaction of the engineer, Mr. M. Gillson. It is of 15 horse power, and will drive all the machinery connected with the elevator with 25 pounds of steam. The boiler was also manufactured by the same firm as the engine. It is 12 feet in length and 37 inches in diameter, and has been tested up to 100 pounds, cold water pressure. At that pressure it was as tight as it is possible for any boiler to be. The water to supply the boiler is procured from a small creek which flows through a gully at the side of the engine house. A well was sunk in the engine house about 16 feet deep; another well was sunk about 15 feet from the bank of the creek, and about the same distance from the engine house. A drain was dug from the creek to the latter well, and pipes laid from it to the steam pump in the well at the engine house. The creek was then dammed to insure a

plentiful supply of water at all seasons, and thus was that difficulty surmounted.

Mr. H. Chisholm executed the plans for the buildings and they were erected under his personal supervision. They certainly reflect much credit on Mr. Chisholm's ability as an architect.

Mr. R. J. McAuslan, millwright, placed the elevator machinery in position, and his work has given entire satisfaction.

Mr. C. Barber furnished the shafting and connections between the engine and the elevator, and the following Meaford firms also aided considerably in the construction: Wm. Train, Messrs. McCann & Sparling, Johnston Bro's and Wm. Butchart.

The work of construction was commenced on the 6th of October, 1884, and the elevator was in working order on the 29th of December.

The view presented to the eye on looking out of the upper windows far surpasses the expectations of the beholder, and the only thing we see wanting to complete the establishment is some means of transferring tourists, and especially ladies, from the ground floor to the windows mentioned, so that they might have a chance of viewing the picturesque scene presented.

Telephone communication will soon be established between the elevator and the house of business on Sykes street; in fact, the arrangements for laying the wire are about completed, so that neither labor nor expense has been spared in making the elevator convenient in every respect for its patrons. For the special purpose for which it was erected, having regard to cheapness, convenience, and rapidity of handling grain, it is considered to be the model elevator of the Dominion.

That this latest venture of H. Chisholm & Co. will prove a success, financially and otherwise, cannot be doubted, and the *Mirror* but echoes the wish of the many friends of the firm in saying, "Long life and success to such enterprising business men."—*Mirror*.

GRAIN RATES IN IOWA.

The Railway Commissioners of Iowa, in their official report, while sustaining the present demand for a decrease in the freight rates on grain, present a very impartial review of the railway side of the question and of the conflicting interests leading to biased views on both sides. Mr. C. E. Perkins, the president of the C. B. & Q. Road, writes to Commissioner McDill that it seems if corn will not move under the present shrinkage of values, that transportation values must shrink too. He thinks it somewhat uncertain whether any reduction, by which the roads could save themselves, would save the crop, still he admits it to be the part of wisdom to make tentatively a small reduction, and follow it, if necessary, by the bare cost. The roads have so vital a connection with the interests of the community that they can afford to lose money temporarily if necessary to promote their mutual interests.

The great barrier to these reductions in the mind of the road managers is the danger that they cannot regain paying rates. The community claim at all times that the lowest rates allowed are remunerative, and all else extortion; and at times when farmers have been receiving the highest prices, any attempt to raise the rates has met with violent opposition, otherwise the president thinks the roads west of Chicago would ere this have diminished their rates. The managers being in doubt as to the real cause of the present slow movement of grain, and as noted whether this reduction would bring the grain to market, prefer in any case to move cautiously. The writer speaks from recent interviews with Eastern road managers, although personally in favor of a reduction.

The commissioners state that of the nearly 26,000 stockholders in the Iowa roads, the stock amounting to nearly \$390,600,000, only 740 are citizens of the state; thus the vast majority of holders of the stock find no voice in the state legislation as to their interests. Here is a clashing of interests, in which each side is apt to find cause of complaint, while the roads owe duties to both alike. Of course the force liable to hold the stronger sway is the immediate one of the many interests, while as to the dividends, either large or small, the complaint is that they go out of the state. The commissioners urge the legislature to encourage the investment by the citizens more freely in these roads. Iowa, it is stated, is the state farthest west dependent entirely on the Eastern market, Kansas and Nebraska having to supply demands farther west, and the former can thus less well afford

than any other state, pro rating per mile. Iowa's products of grain can not bear the costs of long haulage; so here again comes in the divergent interests in direct conflict, although it is truthfully urged that as capital is the product of labor there should be no conflict between them. The commissioners say that they are, in the present emergency, in full sympathy with the demand to lower the rates on grain; they are not aware that the rates have anywhere been raised, but have seen it so stated. The present rate is about one fifth of a cent per pound of corn and two mills for hauling 400 miles, grain worth only two and a half mills, seems not to be just. The final result of these conferences is that eleven of the roads that carry the Iowa grain assert that no increase has occurred since the agreed rates of 1878, which were a little less than the so-called "granger" rates. Various roads here agreed to reduce the rates on grain to Chicago, Peoria, Beardstown and St. Louis, on both sides the river, including Creston and corresponding points, to three cents per hundred weight.

Other replies from railway officials to the commissioners involve only a repetition of the statements of the railroads that we have already fully stated. The president of the Illinois Central, Mr. Clarke, writes that all this clamor arises from the low prices of farm produce. That company, since taking the Iowa lines, have reduced their rates 100 per cent., and yet this has not been sufficient to move the present vast surplus. The close of the year finds, says Mr. Clarke, that the road had lost on the Iowa lines up to Nov. 1, nearly \$62,700, which the close of the year will swell to \$100,000. The road pays 36 per cent. of its gross earnings in Iowa; they are not likely, therefore, to make any reductions on rates.

THE FUTURE OF GRAIN ON THE PACIFIC COAST.

Mr. W. H. Rogers, who has recently returned from a visit to England, extending over two and a half years, answers the inquiries of his numerous California friends, relative to the future of the wheat of that state in competition with other wheat-growing sections of the world, through the columns of the *San Jose Times*. He says that he is convinced that the California wheat-growers can compete successfully with the most favored wheat producing portions of the world in the markets of Great Britain. In the present low range of prices, that look back a century for a parallel, California has felt the pinch of hard times less than any of the European or Asiatic grain-producing states.

This was to the English farmer the first good crop of wheat raised in twenty years, and it has only the more demonstrated to him his hopeless condition in the competition with America and other grain countries in this cereal, and he is gradually turning his attention to other products and stock. The low range of prices has kept grain from being sent from India, Egypt, Australia, etc. and the stocks at the great commercial centers of England have become so low that an increase of prices is an essential to importation. The writer does not think that much higher prices will be obtained for the crop of 1884, which is too large for the facilities of shipping and will call for higher rates of transportation. For the some 1,000,000 tons in California waiting shipment the ocean tonnage cannot supply half, and prices will rule, he thinks, at from \$25 to \$30 per ton. But Mr. Rogers believes the prices for 1885 will be good. He advises the farmers to sell their old wheat as rapidly as possible, and sow as much as possible for the coming crop. In reply to the question, why not hold on to the old crop? he answers that the risks of damage, and of weevil, either before or in passage, will deteriorate its value as compared with the new crop, while the storage room will all be in requisition for the handling of the later crop. Farmers generally need their money and will do better to sell at once.

Since the late revival of speculative business, Chicago Board of Trade bonds have advanced several points, and are now held at 102. The last \$200,000 of these bonds have recently been put on the market, which took them readily and wanted more.

The present duty on American wheat in Turkey is 45½ cents a bushel; in Portugal, 35-5 cents a bushel; in Spain, 22-4-5 cents a bushel; in France, the proposed duty is 14-10 cents a bushel. The only European countries that have no duties on wheat or flour are Great Britain, Holland, Sweden, Denmark and Belgium.

A TALK ABOUT ELEVATORS, RAILWAYS AND THINGS GENERALLY.

The visits of real friends who have something to say, and know how to say it, are always welcome, even to a busy man. An editor sat watching the snow piling up in the streets and heaping itself in curious drifts wherever it could find a lodgement. It was the baddest kind of a bad day and was growing worse, when a visitor entered and shook his garments. When he emerged from the drapery of snow and woolen, we recognized the countenance of M. F. Seeley of Fremont, Neb., the senior of the firm of Seeley, Son & Co., the elevator builders. He was snowbound in Chicago and his loss was our gain; for Mr. Seeley knows how to talk; and we set our phonograph close to him and he unsuspectingly talked right into it. Here is the record. Of course the first query was the universal one:

"How's business, Mr. Seeley?"

"Of course all branches of business have been suffering more or less from the depression, and the grain business has proved no particular exception. It seems to me, however, that general business is bound to improve, especially since all classes of purchasers, both retailers and consumers, have been buying, so to speak, from hand to mouth. With the first appearance of an improved market, every one will stock up, and there will be a rush to buy. It seems to me that the depression has spent its force and that the spring will show this to be true."

"What are the prospects for elevator building, this season?"

"It is exactly the prospects in my own line that make me so hopeful of the future of business generally. Never before have inquiries been so numerous at this time of the year, and never before have we taken so many contracts as early in the season. Already we are commencing two first-class Seeley Elevators for Messrs. Dorsey Bros., of Wahoo, Neb., at Weston and at Mead, Neb., the materials of which have been ordered and are going forward. Then there is another for Mr. Decker, at Ashland, Neb.; while negotiations are pending for a number of others. In fact, all indications are that the coming season will be the busiest season our firm has known, and it now looks as if the question would not be, what elevators can we get to build, but whose elevators will we be able to build."

"But what is the idea of commencing to build so early in the season?"

"Because in the first place, an elevator started now and completed as soon as possible, will be able to handle a part of last year's crop; and a good part, too, in some sections. Then again, those who build early will save money, because machinery, lumber, nails labor and everything else is cheaper now than they will be when the busy time comes."

"And that leads me to say that one way to save money in building an elevator is *not* to plan it yourself and get a carpenter to build it for you. A good many are deceived by the notion that they can save money in this way. It is a great fallacy. Elevator building is an art in itself. To build one economically requires experience the same as mill building. Scores of houses can be found which in the end cost more than a first-class elevator would, and yet are poorly constructed and inconvenient. Perhaps I am saying two words for myself and one for the public; but what I say is true, nevertheless."

"One mistake that is made is building wide and long, rather than high. It is cheaper to elevate grain than to convey it, though people sometimes think the contrary. Consequently a high house is better. It costs less for foundations, requires less power, and is more convenient. Up to a certain height it costs 20 cents per bushel to build for a storage capacity of 10,000 bushels. After the machinery is all in storage capacity can be added to a house built high for about 5 cents a bushel, or just about the same as corn crib cost."

"Facts such as these I have learned by experience. Necessarily our firm has acquired knowledge of building and equipping elevators which could not well be acquired by any except those engaged in the business of constructing elevators; and when we build an elevator we know just what it will do, because we know that effects follow causes. We use none but standard machinery. We make a plain slide engine which we use when the builder has no special preference. We put in

our houses Barnard & Less' cleaning machinery, Webster & Comstock Mfg. Co.'s "Common Sense" buckets, and Buffalo scales. Our houses are so constructed that they need no conveyors; but in special cases, where we have used a conveyor, the Harrison Conveyor has recommended itself by its cleanly work. We have put in some Kaestner Mills, and used the Angle Sieve principle of cleaning grain with success."

"Are many of the Western elevators putting in feed mills?"

"Plenty of them. More every year. The feed grinding business is a natural attachment to the elevator business, and there is generally money in it. I see that the manufacturers of feed mills appreciate this fact by advertising extensively in your columns. And I may say here that every dollar I have paid you for advertising has returned to me more than five-fold."

"How about the dump question?"

"I find elevator men generally ready to combine. The suit against P. Risser & Sons, of Onarga, Ill., brought some two or three years ago, is still hanging fire in the courts. Others have been sued in different places, the demand usually being for \$50 per dump. The Illinois Grain Association (which receives members from any of the states) has about 1,000 members in Iowa and Illinois. The corresponding secretary is W. C. Johnston, of Kankakee, Ill., and the fee for admission, guaranteeing immunity from damages for using dumps, is \$3."

"What will the Western grangers do with the railway problem?"

"I hope they will do nothing hasty; and yet they have some grievances which should be removed by the roads themselves, without waiting for legislation, which may apply a supposed remedy that will act disastrously both on the communities and the roads. The average farmer has a great sense of justice, which can be successfully appealed to. The granger has an inborn hatred of monopoly and aristocrats; and they resent the granting of free passes to legislators and others, for the farmer believes that this is an expense saddled upon him in the long run. If I were the general manager of a railroad I would give no passes to members of congress, legislators, or employes. I would pay employes all their services are worth, and then let them stay at home and do their duty or else 'pay as they go.' I would settle all claims quickly on a just basis, and dispense with some of the liars—lawyers, I mean. The money thus saved would go far to keep up a good state of feeling between the roads and the people. I would class elevator materials the same as railroad materials, for an elevator is a part of a railroad's equipment, and is as necessary to the company as a freight or passenger depot. Six carloads of lumber and machinery would suffice for a 20,000-bushel Seeley Elevator. Five hundred cars of grain each year (a low estimate) for ten years, would be 5,000 cars. Suppose the freight on the six cars to be \$300; that would be six cents a car, a low figure to pay for the difference between loading those cars to be returned by the first train, and having them one, two, or three days on the track. We have on the Union Pacific twenty Seeley Elevators that can load a train in from five to ten hours."

"And this leads me to say that an elevator is a great saving to the roads in the amount of rolling stock needed to do their business. This is the main reason why elevators should be fostered. The companies ought not to discriminate but treat all fairly. I do not think the farmers object to demurrage. And I think that by a proper treatment of the whole community, the road can gain the confidence and co-operation of the community. If this is done, hostile legislation will not be attempted. I was once a station agent on the Lake Shore railroad, and received a letter from the chief clerk that in case of doubt as to the class of freight and the rate, to give the shipper the benefit of the doubt. If all railroads should act in the same spirit, I am convinced that farmers would not seek to trammel the roads in any way; but would feel as the people along the Lake Shore felt in those days, that it was their road. Well, I must be going."

The syndicate formed, as claimed, in association with the Canadian Pacific Railway Co., to purchase wheat in Manitoba, etc., is defended by the *Montreal Gazette* on the ground that it has increased the price of wheat to the Manitoba producers, while the course of the American roads in the Northwest has made the prices there unjustly low. The *Toronto Globe* finds no fault with the formation of an independent syndicate for grain purchasing; but if, as is supposed, the Mitchell scheme is operated by the stockholders mainly of the railway, in order to obtain better rates, it is fraught with danger to the people of that section.

A NEW USE FOR SAFE DEPOSIT VAULTS.

One of our well-known New York seed firms has now on deposit in the Mercantile Safe Deposit Company's vaults four hundred pounds of Henderson's Snowball Cauliflower Seed, which at the selling price of one hundred dollars per pound shows the value of this seed to be forty thousand dollars. Not only is this plan of depositing in vaults found to be cheaper than insurance, but what is of more importance is that if the seed should be destroyed by fire this quantity necessary for their trade could not be replaced at any price in time for the spring sales. When it is considered that four hundred pounds of cauliflower seed will under favorable conditions produce nearly thirteen million plants, which when headed for market and sold at even eight cents per head will produce the sum of three-quarters of a million dollars, the value this vegetable has attained in this country, where twenty-five years ago it was almost unknown, becomes readily apparent.

GRAIN ELEVATORS AT DUBUQUE.

There are two fine elevators at Dubuque, Iowa, conducted by Bentley & Harding, in which a specialty is made of cleaning thoroughly oats, barley, and milling wheat. The elevator in East Dubuque, Ill., has a capacity of 150,000 bushels, using a 100-horse power engine, a full equipment of cleaning machinery, two hopper scales of 30,000 pounds capacity, one of 15,000, and one track scale of 80,000 pounds capacity, and five elevators, the largest of which is capable of raising 4,000 bushels per hour. The Dubuque elevator, Iowa side, is driven by an engine of 35 horse power, and has all the necessary cleaning machinery, such as separators, smutters, cockle machines, etc., of the latest improved styles, all conveniently arranged. The track scale, with a capacity of 80,000 pounds, is connected by switches with the M. & St. P. and the Illinois Central Roads. It runs night and day, requiring six men, with the bookkeeper, making a force of fourteen for the two elevators, handling about twenty carloads of grain daily.

THE AGRICULTURAL DEPARTMENT'S CROP RETURNS.

The Agricultural Department Report, issued on Jan. 22, places a full estimate of the corn crop at 1,795,728,432 bushels, the largest aggregate, but not the largest yield per acre, ever grown; its average was 25.06 bushels, which has not been excelled since 1890. The farm value of the crop is estimated at \$40,135,859, less by \$18,000,000 than that of 1883, the prices being respectively in those years 35.08 and 42 cents. The average price is 36.5 cents, or one cent less than in 1879. It has been lower in ten years twice only, in 1877-'73, after two large crops. It is highest in Florida, 80 cents per bushel, and the lowest price is 18 cents in Nebraska; Kansas 22, Iowa 23, Missouri 26, Illinois 31, Minnesota 33, Indiana and Wisconsin 36, Michigan 40, Dakota 41, Kentucky 43. It is 52 in Pennsylvania, 54 in New Jersey, and 60 in New York. The range of values in the South Atlantic states is from 63 in Delaware to 68 in South Carolina, and 80 in Florida, increasing in the order of movement, except that Georgia reports 70 cents. In the more Western states it is 45 in Tennessee, 54 in Arkansas, 61 in Alabama, 62 in Mississippi and Texas, and 67 in Louisiana. Nebraska returns, as the state average, 18 cents per bushel, the price varying in different counties from 12 to 23 cents.

The wheat crop is estimated at 512,763,900 bushels, valued at \$330,861,234; the average farm price being 65 cents, against 91 cents last December. The December price in thirteen years has been below \$1 per bushel in the five years, 1874-'78-'80-'82-'83. The average in Nebraska is 45 cents; 45 in Kansas, 46 in Dakota, 50 in Minnesota, 55 in Iowa, 62 in Missouri, 63 in Illinois, 67 in Indiana, 74 in Michigan, and 75 in Ohio. The average home-grown wheat in New England exceeds \$1, in New York it is 85 cents, in Pennsylvania 86. It is 80 cents in Virginia and 83 in Maryland. The price of wheat is lower than it has ever been reported by the department. It is said to be lower in Great Britain than at any other period of the present century. It is a result that is perfectly natural, and that has been predicted repeatedly in these reports. A series of crop failures altogether unprecedented in Europe, stimulating production all over the world, could have no other outcome. These low prices, however, will soon reduce the area and relieve over-production.

The crop of oats also presents the highest aggregate ever grown in this country; the area was larger by 1,000,000 bushels, and the estimated total is 583,628,000, against 571,302,400 bushels in 1883. The estimated yield per acre is 27.04, against 25.01 in 1883; the average price is 57.07, or 5.03 cents less than that of the previous crop, and the lowest ever reported except the average of 1878, 24.06 cents, when the yield was placed at 31.04; the aggregate was the largest ever made up to that date. The downward tendency of corn at that time was an additional depressing cause.

It is said that a European syndicate, composed mainly of distillers, wants to contract for 110,000,000 bushels of American corn annually. This rumor seems to be nothing but a rumor.

Elevator and Grain News.

J. A. Eamons, grain dealer, of Eden, Ill., has sold out. Chas. Weir, grain dealer, of Brouson, Kan., failed recently.

William Keller, grain dealer, of Lancaster, Ohio, has assigned.

Howard & Co., are about to build a large elevator at Dallas, Tex.

Frank T. Bockius, grain dealer, Southampton, Pa., has made an assignment.

Gray, Allen & Co., grain commission merchants of this city, have suspended.

The C. C. Crowell Lumber & Grain Co. succeed C. C. Crowell, of Blair, Neb.

Jacob Williams, grain dealer of Collins, Iowa, has gone out of the business.

Hood & Gann, grain dealers, etc., of Atlanta, Ga., have dissolved partnership.

George H. Wolcott, grain dealer, of Boston, Mass., has failed, with \$5,000 liabilities.

J. H. Hawley & Co., grain and commission merchants of Galveston, Tex., have sold out.

William Norris, grain dealer, Fontana, Kan., has admitted J. H. Broner to partnership.

Watson & Wright, grain dealers, McComb, Ohio, have dissolved. David Wright succeeds.

W. J. Riley & Co. succeed Riley & Witt, proprietors of an elevator, etc., at Lebanon, Ind.

McLennan, Ostenburg & Co. succeed McLennan & Enery, grain buyers, of Wahoo, Neb.

Baker & Wilson succeed Baker, Wilson & Co., grain and flour dealers, of Templeton, Mass.

Sessions & Ryan, grain dealers, of San Antonio, Tex., have dissolved. H. H. Sessions continues.

Duluth, Minn., is to have a drying elevator, 30x90 feet with a working capacity for 500,000 bushels.

Ladner & Headmen, flour, feed and grain dealers, of Philadelphia, Pa., have dissolved partnership.

H. H. Ocker and L. Hoepker have been admitted into the grain firm of L. Lemcke & Co., St. Louis, Mo.

A. B. Taylor & Co., grain dealers, Minneapolis, Minn., have opened a branch office at Duluth, same state.

Dorsey & Sears, grain dealers, of North Bend, Neb., have dissolved, and are succeeded by J. E. Dorsey.

Chas. G. Brockway, flour and grain dealer, of Boston, Mass., has failed. Liabilities, \$3,271; assets, small.

Baker & Shultz, grain dealers, etc., Fortville, Ind., have dissolved. Each party continues in the business.

The Cannon Valley Elevator at Northfield, Minn., has taken in 25,000 bushels of wheat since its opening, on Jan. 2.

E. Hastings, proprietor of an elevator at De Witt, Neb., has failed. Liabilities, \$17,000; assets, \$18,000 to \$20,000.

The advance in price recently at Union City, Minn., brought wheat to market amounting to 63,000 bushels in one day.

Mahol, Probest & Co., grain dealers, Baltimore, Md., have dissolved. The business is still conducted under the old style.

Elevator "D," of the Van Dusen Elevator Co., Minneapolis, Minn., has been made "regular" by the Chamber of Commerce.

A railroad syndicate has purchased land at Connor's Point, Duluth, Minn., on which to build an elevator and other buildings.

Geo. S. Atwater has been admitted to partnership by D. Atwater, grain dealer, of Massillon, Ohio. The firm name now is D. Atwater & Son.

J. B. Richmond & Co., of Mattoon, Ill., have sued the Peoria, Decatur & Evanston Railroad for \$433 in overcharges on 111 carloads of grain.

The Hall & Dann Bbl. Co., of Minneapolis, Minn., have applied to the Chamber of Commerce of that city to have their elevator declared "regular."

McCulloch & Herriott, millers and grain buyers of Souris, Northwest Territory, intend erecting an elevator at that place, with a capacity of 20,000 bushels.

T. L. Beall & Co., flour and grain dealers, Philadelphia, Pa., have dissolved partnership. Theodore L. Beall continues the business under the old firm name.

The elevators at Kasson, Minn., have the following capacity: W. G. McCutchen, 40,000 bushels; Wheeler & Houston, 35,000 bushels; L. C. Porter Milling Company, 20,000 bushels.

H. K. Lincoln, grain commission merchant, Detroit, Mich., has admitted Chas. J. Heath to partnership. Business will be conducted under the firm name of Lincoln & Heath.

Walker, Fiske & Co., of Milwaukee, Wis., state that the recent advance in wheat has added \$7,000,000 to the value of the property in sight, and probably \$50,000,000 more in the granaries of the farmers.

The Dubuque Oatmeal Co., of Dubuque, Iowa, have joined the oatmeal pool, which comprises all the oatmeal mills in the United States except four on the Pacific coast; they include the mills at Chicago, Iowa City, Des

Moines, Davenport, Muscatine, Cedar Rapids, Cedar Falls, Rockford, Leavenworth, Peoria, Akron, Cleveland, and one or two others, all of which can turn out 5,000 barrels per day.

The new elevator at St. Louis, Mo., will have a gross capacity of 700,000 bushels, and a net capacity of 450,000 bushels. It will be supplied with a number of bins for single car-load lots, as well as bins to hold 5,000 and 10,000 bushels.

The Jamestown (Dak.) *Alert* states that 90 per cent. of the wheat received by the elevators at that point has graded at Duluth No. 1 hard. It thinks the worse fate possible would be for the elevators to come under the control of the Northern Pacific Elevator Co.

The Leavenworth Grain & Elevator Co. of Leavenworth, Kan., has been organized with a capital stock of \$50,000, for the purpose of purchasing and disposing of grain by elevator or otherwise. Joseph Whitaker, Geo. W. Wells and T. H. James, of Leavenworth, are the directors.

The farmers of Meeker Co., Minn., at a recent meeting, resolved that the Legislature be requested to create a system of state inspection of grain, and that the inspection be made at the country elevators. That the roads be compelled to put in track scales and give shipping bills and be responsible for their face at the point of delivery.

The grain blockade at Duluth, Minn., has been removed by Geo. H. Christian, of Minneapolis, leasing the Duluth and Western Elevator at Duluth for four years. Locke & Bunker, the proprietors, had petitioned the board to have the elevator made "regular," but were refused, though there was the testimony of experts to show that the house was absolutely safe. Mr. Christian's petition to have the house made "regular" came up before the annual meeting of the board, and was passed upon favorably, although the elevator has undergone no change whatever. During this time a storage capacity of 600,000 bushels has remained in enforced idleness.

Charles Kaestner & Co. are building a four-cylinder engine for the Cowdrey Engine Company, and are putting in a portable flouring mill for M. Brand, at Brandsville, Mo. This firm have just shipped to Borland & Co., at Stanton, Neb., an Atlas Engine and boiler, together with several mills, a corn-sheller and a lot of general mill machinery. Their other recent shipments are to Carr & Lobdell, Bartlett, Ill., a 20-inch mill with general mill machinery complete; to the Windland & Walters Company, Waseca, Minn., one 20-inch mill; to F. W. Surfis, Topeka, Kan., a 20-inch mill and a flour bolting chest; and to R. G. Schuler & Co., Minneapolis, Minn., two 20-inch mills.

THE ELEVATOR STORAGE CAPACITY OF MINNEAPOLIS.

Our storage capacity has been materially added to during the past year, but is yet inadequate. The need of more storage room, however, does not seem likely to go long without being met, as there are several schemes now in the embryo state that are designed to make ample provision for the present deficiency. The appended table gives the names of Minneapolis public elevators and their capacities:

ELEVATOR	OPERATED BY	CAPACITY, BUSHELS.
A1	Minneapolis Elevator Co.	800,000
A2	"	1,250,000
B	Milwaukee & St. Paul R. R.	900,000
C	H. W. Pratt & Co.	140,000
D	Milwaukee & St. Paul R. R.	200,000
Central	G. W. Van Dusen & Co.	300,000
Pillsbury	C. A. Pillsbury & Co.	425,000
Lowry	Street Railway Co.	130,000
Baker-Potter*	Baker, Potter & Co.	600,000
Transfer†	Northwestern Elevator Co.	535,000
Total		5,280,000

*Just completed, but not yet in use.

†Located between Minneapolis and St. Paul.

The following is the storage capacity of the mills:

	BUSHELS.
Anchor	7,500
Columbia	70,000
Crown Roller	75,000
Catarect	28,000
Dakota	2,000
Excelsior	7,000
Galaxy	60,000
Holly	2,000
Humboldt	25,500
Minneapolis	190,000
Northwestern	35,000
Palisade	30,000
Phoenix	20,000
Pillsbury A	126,000
Pettit	14,000
St. Anthony	8,000
Standard	30,000
Union	4,000
Washburn A	110,000
" B	6,000
" C	65,000
Zenith	20,000
Total	823,000

The only change that has lately occurred in the storage capacity of the mills has been in the case of the Pillsbury A. A hundred-thousand-bushel elevator has been built adjoining for that mill, making a valuable addition to that complete establishment, and without which it before had comparatively no storage.

RECAPITULATION.

	BUSHELS.
Public elevator storage	5,280,000
Storage in mills	823,000
Total storage capacity	6,103,000

—Northwestern Miller.

Items from Abroad.

Last year the average price of English wheat was 35s. 8d. per quarter, against 41s. 7d. in 1883. The price during 1884 was the lowest of any year since 1780, when it was then 35s. 8d.

The German Parliament is discussing the question of grain tariff. The motion is to treble the present duties on all cereals but rye, which is to be doubled, for purposes of protection.

The large grain elevator at Liverpool, Eng., is about ready for the reception and storage of grain. This elevator will be thoroughly equipped with grain cleaning and automatic weighing machinery.

In British India the area under wheat is about 20,000,000 acres, and the yield is between 5,000,000 and 6,000,000 tons. The area in native territory would give 6,000,000 additional acres, yielding about 1,250,000 tons.

M. Tirman, the Governor General of Algeria, states that in that colony the area of land sown in grain is about 7,300,000 acres, of which 1,150,000 acres belong to Europeans. The total yield is less than six bushels per acre.

The French government have indicated the amount of duty that is to be levied on foreign grain. It is proposed that a duty of 2 francs, 60 cents, shall be levied on every 100 kilograms of grain imported into France, while the tax on the same quantity of flour is to be 5 francs, 20 cents.

It is stated that the average wheat crop at South Australia for the past eight years only averaged six and one-half bushels per acre, which at present prices would be worth only \$5. At \$1.50 per bushel this would not pay costs. It is stated also that the wheat acreage of that country is increasing, and finds many advocates.

The Stabat floating elevator at Dunkirk, Scotland, is working very successfully. It is designed to discharge ocean-going vessels of their grain, clean the same, and weigh it into sacks at the rate of 40 tons per hour. One of Gillett's Patent Elevators is used for raising the grain from the vessel. Pooley's Automatic Self-Registering Scales are employed for weighing the grain. The elevator is lighted by electricity. The "Stabat" was an old dismantled whaling vessel. The deck houses remain, and form a saloon for the captain and berths for the men engaged on board. J. W. Throop, of London, Eng., furnished the machinery.

ELEVATOR CHARGES IN NEW YORK STATE.

The advocates before the New York Legislature of a bill to regulate elevator charges were heard by the Committee of Commerce and Navigation on Feb. 5. Capt. Clark favored its passage and showed that, while the aggregate charge per 1,000 bushels for transferring grain at the elevators in Buffalo was \$14 and in New York \$18, in Chicago it is only \$7.75. In New York Harbor the charges are 960 per cent. higher for trimming grain in ships than Chicago charges are. He stated that in June last the Buffalo Terminal Elevator charged for transferring 166,000 bushels of oats from the steam-barge Onoko \$2,199.90, of which the vessel paid \$954, or \$622 more than it would have paid in any Canadian port. The hearing was adjourned and committees of the Senate and Assembly will hold a joint meeting and hear both sides.

THE COMMERCE OF MILWAUKEE.

W. J. Langson, Secretary of the Milwaukee Chamber of Commerce, sends the *News* a statement of the receipts and shipments of flour and grain from Milwaukee. The totals are as follows:

	Receipts.	Shipm'ts.
Flour (bbls)	4,028,496	4,573,759
Wheat	13,073,487	6,988,085
Corn	841,560	197,686
Oats	2,969,286	1,712,411
Barley	5,698,404	3,755,759
Rye	340,468	218,752
Total in bushels	41,051,487	31,167,729

The above figures include the through shipments. The receipts and shipments, subtracting the through movement, are as follows:

	Receipts.	Shipm'ts.
Flour (bbls)	2,511,634	3,056,887
Wheat	10,167,531	4,082,479
Corn	788,080	146,386
Oats	1,547,486	280,551
Barley	4,268,529	2,385,749
Rye	300,562	178,852
Total in bushels	28,375,111	20,779,908

It will be seen that the receipts and shipments of wheat are both considerably less than those of Duluth, receipts in round numbers 10,200,000 bushels against 13,500,000 bushels at Duluth; shipments 4,000,000, against 11,500,000 at Duluth. There were manufactured at Milwaukee 1,177,676 barrels of flour.

Canals and Marine.

The *Buffalo Courier*, admitting that it is still early to predict as to the lake traffic prospects of the coming season, says that still there is little doubt of an improvement on the last, the worst season for many years. There are large stocks of grain in the West to be moved eastward, and the low prices will probably cause the lake route to be the main one used, notwithstanding the sharp competition of the roads, but this method cannot compete in cheapness with the waterways, and these roads will eventually be compelled to require remunerative prices.

The number of vessels built in Canada in 1884 was 358, 53 steamers and 305 sailing vessels. The steamers included 47 screw, 5 paddle, and 1 stern-wheel vessel, the total tonnage being 5,078. The sailing vessels comprised 15 ships, 8 barques, 14 barquentines, 3 brigs, 19 brigantines, 227 schooners, 6 sloops and 13 barges, the total sailing tonnage being 65,200; 43 vessels valued at \$416,756 were sold to other countries in 1884. These were 5 ships, 7 barques, 3 barquentines, 13 brigantines, and 15 schooners. The tonnage of vessels sold by Providence was: Quebec, 4,173; Nova Scotia, 4,800; New Brunswick, 4,657; P. E. Island, 3,738. Of the 53 steamers, 31 of 3225 tonnage were built in Ontario.

There has been presented to the House, by Representative Rogers, of New York, the proposition to enlarge the Erie and Oswego Canals to a capacity of vessels of 600 tons. But the questions asked: Why not pursue the same course as our Canadian neighbors, and make the enlargement equal the wants of a ship canal? New York might, it is thought, have undertaken this to the advantage of her trade interests, but vested interests interfered. It is thought that the general government will not be so easily influenced, and find that it has a constitutional right and general advantages to our commerce in making improvements to offset the attractions of the St. Lawrence system when enlarged.

The foreign shipping of American grain in American ships makes a poor showing in our grain freights, as compared with foreign ships, making an immense transfer of our payments for our breadstuffs from our industrial classes to those of other nations. During 1884 this country transported of our grain exports some 69,345 bushels in two sailing vessels. England carried from our ports over 25,000,000 bushels in 654 vessels; Germany, nearly 6,450,000; Belgium, over 5,000,000; France and Holland came next. Most of this carriage is done by steam, these vessels having taken last year of wheat over 28,000,000 bushels; of corn, nearly 9,800,000; rye, 5,000,000; oats, some 2,500,000, and of barley a little over 65,000 bushels.

Ex Gov. Bross, of Illinois, presented to Congress on Jan. 28 a printed argument in behalf of the Hennepin Canal, repeating the facts, estimates of cost, and immense advantages of this scheme to the general commerce of the West and Northwest, which we have repeatedly and fully given to our readers. The estimated cost, \$7,000,000, is offset by the fact that the corn and wheat crops of 1884 of the region tributary to this waterway were at least 1,000,000,000 bushels; if only one cent. per bushel on the transportation of half these crops were saved to the people, it would aggregate over \$5,000,000; and this is only a fraction of the vast tonnage seeking an outlet eastward and to Liverpool, to which this canal would be an essential part of the great waterway of transportation.

The sub-committee of the House on Railways and Canals, through Representative Atkins, of Pennsylvania, have reported favorably on the bill making an appropriation for a survey of a canal from the eastern shore of Lake Michigan to the Detroit River, of \$10,000, to be expended under the direction of the Secretary of War. No official surveys have been made, but the reports of private observers entitled to confidence state that the region through which the canal would pass is comparatively level, well supplied with running streams, and bordered along a large part of the way by deep, never-failing lakes, of which there are some 300, varying in circumference from two to ten miles, a considerable number being above the canal level. The length of the canal would be about 175 miles, across the State of Michigan, and would shorten the route of transportation from Chicago, Milwaukee, etc., to Buffalo, about 550 miles, or one-half the distance from this city. The season of navigation would be prolonged at least thirty days, the gain being in the spring and early winter months of over 15 per cent. in open navigation. On steam vessels there would be a saving of an average of two days each way per trip, or some sixty days in the season, while on sailing craft the difference would be still greater. The advantages of a ship canal, says the *Cleveland Marine Record*, for steam vessels and their tows, would be equivalent to 50 per cent. in time, or increase the number of their trips in that ratio. The late navigation by lake is always hazardous, amounting, it is said, in twenty years, between Chicago and Buffalo, to a loss of \$1,000,000 annually. This danger would be lessened one-half by the proposed route. All these savings, which can only be approximately estimated in value, says the *Record*, can be gained at an expense not to exceed \$4,125,000. The vast agricultural region of the West, to which this canal would furnish an outlet for its products, speaks for itself; it includes, to a greater or less extent, five great grain states, whose aggregate crop of cereals is larger to-day than was that of all the states

twenty-five years ago. The course being pursued by the Dominion in increasing, at immense comparative expense, her waterway facilities, should be a stimulus to our country to act vigorously in the same direction if we would retain our control of foreign grain shipments.

The Secretary of War has received and sent to Congress a report of Lieut.-Col. Poe, in behalf of the engineers, relative to the Sault Ste. Marie Canal, as follows: They state that the commerce through the canal during 1883 was 2,042,295 tons (registered); that the annual increase in tonnage for fifteen years had been quite uniform, averaging 107,313 tons a year; that only 11 per cent. of the vessels passing the canal during 1883 were of sufficient light draught to admit of their passing through the old locks, and if these figures were maintained for eight years the present lockage system, although in constant operation, would be insufficient to take care of the shipping. We now have complete returns for the season of 1884, and the annual increase in tonnage has not only been maintained, but largely exceeded—that is to say, the registered tonnage passing through the canal during the season of 1884 was 2,997,837 tons, an increase of 955,578 tons, or nine times the average annual increase for the preceding fifteen years, or to state it possibly with greater force, this increase in 1884 is equal to the entire commerce through the canal during the first five years it was open to navigation. Should this rate of increase be maintained, the full capacity of the lockage system will be reached in four years instead of in eight years as estimated in the annual report. The increase in registered tonnage was 47 per cent.; in grain 87 per cent.; in flour 82 per cent., and in iron ore 43 per cent. But the facts adverted to do more than indicate the necessity for beginning the enlargement of the canal at the earliest date possible. They protested in the strongest possible terms against all propositions to fix the old locks for dry-dock purposes, or to build a dry-dock anywhere in the immediate vicinity of the canal to be operated therewith. Another point which particularly invites attention is the fact that no portion of the work of enlargement recently completed will be lost. On the contrary, it is just that much done toward the project so strongly recommended.

WHEAT PRICES AND FREIGHTS.

In the comparisons of wheat prices, it is interesting to bring into view the cost of freight from the West to the seaboard, whence the surplus product is shipped to importing markets abroad. We have maintained, by expressions from time to time, that the wheat prices of the West, freights considered, have been lower this season than during any year since the exportation of wheat has reached proportions of importance.

In 1869-70 the exportations of wheat (flour included) first reached the 50,000,000 bushels point, the highest previous to that year being 30,000,000 in the preceding year. In the following compilation will be shown the annual wheat crops of the United States and exports (flour included), stated in millions of bushels, with the lowest and average price of No. 2 wheat in Chicago, and average rates of freight from Chicago to New York per bushel of wheat, by lake and rail, with the lowest Chicago price and freight to New York added, annually for seventeen years from 1868 to 1884 inclusive:

	Crop.	Exports.	Lowest	Average	Freight	Freight
	Millions.	in thousands.	price.	price.	to N. Y.	to N. Y.
1868.	224	50	104½	170½	29	133½
1869.	260	54	76½	111½	25	191½
1870.	236	53	73½	97	23	95½
1871.	231	40	99½	121½	25	124½
1872.	259	52	101	125½	28	129
1873.	251	92	89	117½	26½	115½
1874.	309	73	81½	108½	16½	98½
1875.	232	76	83½	98½	14½	97½
1876.	289	57	83½	102½	11½	94½
1877.	374	98	104½	127½	15½	117½
1878.	420	149	77	96½	11½	88½
1879.	449	181	81½	99½	13½	94½
1880.	498	186	86½	105½	15½	102½
1881.	380	122	95½	115½	10½	105½
1882.	404	149	91½	118	10½	102
1883.	420	111	90	101½	11½	101½
1884.	513	...	69½	82½	9½	79½

In the above the exports are for twelve months beginning on July 1 of the year stated. The freight rates for 1884 are the average from Jan. 1 to Sept. 1.

Freight rates by lake and canal averaged 8½ cents below those quoted for lake and rail, and all-rail rates averaged 6½ cents higher. In 1884 the average for nine months to Sept. 1 was 6.60 cents per bushel by lake and canal, 9½ cents by lake and rail, and 13 cents all-rail—the latter being nearer to the other figures than in any previous year.

Our table shows that the figures indicating the Chicago lowest price and average freight to New York by lake and rail was 79½ cents in 1884, compared with 88½ in 1878 as the lowest of similar figures in previous years, and compared with an average of \$1.01½ for five years from 1879 to 1883 inclusive, 99½ cents from 1874 to 1878, and \$1.16½ for six years from 1868 to 1873, the average for sixteen years from 1868 to 1883 inclusive being \$1.06½.

These comparisons we believe will be found interesting by the trade, and we take pleasure in being able to offer the same, affording exhibits with reference to price and freights which have not previously been given from any other source.—*Cincinnati Price Current*.

Notes from the Exchanges.

The Duluth Board of Trade has decided to build a \$70,000 Board of Trade building during the coming season; and the grain men of that city and Minneapolis will connect the two cities with a special telegraph line for their own exclusive use.

The Dedication Committee of the Chicago Board of Trade have decided to devote three days to the ceremonies, and have set the time for the last week in April commencing with a sociable on April 28. On the following morning a farewell address will be given in the old hall; a procession, under military escort, will take the members and guests to the new building, where the ceremonies will be appropriately conducted; a grand ball and banquet will follow in the evening. Thursday will be devoted to visiting with guests points of interest in the city; all to be within an outlay of \$25,000.

At the recent annual election of the San Francisco Chamber of Commerce the following officers were almost unanimously elected: President, Henry L. Dodge; first vice-president, William L. Merry; second vice-president, Edward L. G. Steele; and for trustees, J. N. Knowles, Alfred P. Eifelt, W. H. Dimond, A. E. Hecht, C. L. Taylor, Albert Miller, E. W. Newhall, F. L. Casle, J. J. McKinnon, W. W. Montague, L. L. Baker and Hugh Craig. Some admirable improvements have been made in the California and Leidesdorf streets' outer entrances to the hall.

The Chicago Board of Trade have commenced to take their time from Allegheny Observatory; the Secretary has so notified the members, and says the variations would not equal one-sixteenth of a second. The clock has been very spasmodic in its movements, being frequently three or four minutes out of the way. The Allegheny time is claimed to be more accurate than that of the Dearborn Observatory here, yet it is well known that the fire alarms, telegraph offices, etc., of this city, supplied by the latter, have found no variations at the times specified by the Board. The home service ought, it would seem, to be reliable and to be sustained by our own institutions.

The recent decision of the Chicago Board of Trade to inaugurate a 'Call' under its own auspices, has met with strong opposition, especially on the part of commission dealers. Prominent among the objections urged are these: It forces the entire commission trade into a public exhibition of their orders, when any delivery is called for, and furnishes the private manipulator information for his own enrichment. It is essentially in the interests of speculation as against those of legitimate trade, and, as is said, is about on a par with the bucket-shops. The call gives an unfair market, as the moneyed man may secure a front seat with large advantages over his less wealthy compeer; it furnishes the opportunity for the unscrupulous operator to "stand in" with the caller and obtain advantages by favoritism, a well-known fact in the experience of the defunct board. The method is on the narrow gauge, compelling delays for the call of one person, and its record is made in a bedlam of confusion. Its annual tax of \$50,000 to \$75,000 is not required, as the new building will soon furnish the needed additional income, and except to the dealers in "long futures" and "options" simply is an injury to the work of the Board, and the steadiness of trade, giving only a sort of gambling excitement in its change of methods as a recompense. This feature of the gold and stock exchanges, for the first time introduced into the produce exchange, has an abundant illustration of its evil effects in the histories of the separate calls that have been from time to time organized and operated that have been pregnant with evils, and will only endanger the progress and success of the new departure. The short afternoon session on the broad gauge plan supplies in a healthy and regular way all the additional facilities that trade demands.

IRON VERSUS WOODEN SHIPS FOR GRAIN.

Mr. Henry Taylor, who had personal experience in ocean shipping from 1866 to 1879, replied in the *Chicago Tribune* to an article of Mr. Bates' giving the preference to wooden vessels, as compared with iron, as grain carriers. The writer says that the value in the market of cargoes in A 1 all-iron vessels is 25 cents per quarter over the same in all-wood. The great danger of damage in the latter is well known to the shippers of the Pacific Slope.

A first-class iron vessel, says Mr. Taylor, can, he thinks, be built on the Clyde for less than a wooden one of even tonnage, either on the Pacific or Atlantic Coasts. The iron ship would be classed as A 1 for twenty-one years; the wooden one would be so classed only for seven, in a few cases for ten or fourteen years; after these dates few would risk a cargo around the Horn. Iron ships make fully as good time, or a better average; while underwriters would not insure a grain cargo in a wooden vessel of seven years at as low a rate as in one of iron of double that age.

THE AMERICAN ELEVATOR AND GRAIN TRADE.

Published on the Fifteenth of each Month by
MITCHELL BROS. COMPANY.

(INCORPORATED.)

OFFICE: Howland Block, 184 and 186 Dearborn St., Chicago, Ill.

Subscription Price, : : : \$1.00 per Year
English and Foreign Subscriptions, 1.50 "

English and Foreign Subscriptions may be sent to W. H. Smith & Son, 186 Strand, London, W. C., Eng.

A. J. MITCHELL, - - - Business Manager
HARLEY B. MITCHELL, - - - Editor

Vol. III. CHICAGO, ILL., FEB. 15, 1885. No. 8.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

THE HENNEPIN CANAL.

An appropriation for the Hennepin Canal has again been added to the River and Harbor Bill, which will soon come before Congress for action. The effect of the completion of this canal and the required improvement of the Illinois and Michigan Canal will be to lower the freight rates on grain throughout the whole region tributary to this traffic. However much of truth there may be in the statement that the railroads are rapidly getting the heavy as well as the more valuable freights, it still remains clear that the waterways are the important factor in regulating rates and preventing exorbitant tariffs, as is shown in the value of the Erie Canal, and in the fact that the roads in all cases use their utmost endeavors to thwart all such schemes. The influence of this projected canal would be felt throughout the Northwest and Southwest to the Missouri River, and the deductions thus caused in transportation rates would be added to the value of the grain to the producer. Lakes, rivers and canals do not readily lend themselves to pools; they are nature's common carriers. This is a kind of "water" that benefits the masses, and the competition in this case will cover not less than 10,000 miles of roads in the states of the section above referred to. There will be a close watch on the vote, and individual responsibility cannot be shirked by our representatives in Congress.

ELEVATOR CHARGES AT TERMINAL POINTS.

Attention is again directed to the elevator charges at Buffalo and New York City. The Receivers and Shippers' Association, of this city, has protested against the rates charged for transferring grain at Buffalo, which certainly appear exorbitant compared with those asked at Canadian ports. A bill is pending before the New York Legislature to secure a correction of these abuses by fixing the charges by statutory provision. In Chicago the charges for transferring grain are about half what is charged in Buffalo, and much less than half what is charged in New York City. Yet the Chicago elevators make plenty of money. Elsewhere the figures of Capt. Dupuy are given, which certainly prove that if the Chicago price is fair the Buffalo and New York prices are exorbitant. The situation at Buffalo is familiar to our readers. All the elevators there (and there must be twenty-five or thirty) are in a pool. Some are permanently closed, and yet receive their share of the profits. Pooling may be all right in some cases, but the Buffalo pool is exorbitant in its charges. Legislative control is not a desirable

thing in any business, and the Buffalo and New York houses can avoid it by putting their charges down to a reasonable point. At present they seem to be inviting legislative interference.

THE ROADS AND ELEVATORS.

Railroads are pretty much like individuals—some do business on business principles and others are blind to their own interests; being blinded by the desire to grab the dollar in sight, and overlooking the mint of dollars that lies beyond. They illustrate the old saying, that you can hold a three-cent piece so closely to your eye as not to see the sun.

In the West the chief business of the roads is carrying grain. We have explained, time and again, the advantage to railroads of having plenty of elevators along their lines. They can afford to foster the elevator interest, because, with ample elevator capacity along the road they can dispense with unnecessary rolling stock, with extra help, and, above all, they can keep their stock moving. Some roads see this plainly enough. Others have yet to learn it.

Among the best roads in the West are the Chicago, Burlington & Quincy, the B. & M., and the Chicago, Milwaukee & St. Paul. All of these roads appreciate the direct financial benefit of having elevators on their lines. There are some other roads that are learning to appreciate the value of elevators, and there are some others that are simply hoggish in their treatment of elevator men. There are some others that make enemies and certainly do not subserve their best interests by discriminations in favor of one shipper over another.

This is short-sighted policy, and we attach no charge to the advice that all just cause of complaint should be removed. An enlightened and liberal policy to elevator men, encouraging them to build and then treating them all on a fair business basis, will smooth out some of the hard places that the roads have found in the past two years.

THE RAILWAY BILLS IN THE SENATE.

The discussion of the Inter-State Commerce Bill in the Senate was continued on Jan. 16, by the consideration of an amendment prohibiting the roads from charging more for short than for long hauls. The principal objection was that, by inference, it legalized charging an equal rate for the short and long hauls. When an amendment was proposed to specially preclude this construction, Senator Cullom, the manager of the bill, said that it was evident that the Senate was not ready to enter upon any specific legislative legislation; the senator's plan is the appointment of a commission, and he expressed his intention to urge the matter to a conclusion. The debate so far shows clearly that the Senate will not enact the Reagan bill, and whether the House will yield its large majority in its favor and accept a bill from the more conservative body, is a matter of doubt.

Senator Van Wyck addressed the Senate at length on the matter; he is a strong supporter of the Reagan bill, and considers the Senate bill as rope of sand so far as any real control over the roads is concerned. In our resume of the House discussion of this bill in our December issue, the arraignment of the roads, their acquired monopoly of power, watered stock, etc., is substantially the same in its facts as the senator presented, while demanding specific laws with penalties, in lieu of a commission. Senator Brown, of Georgia, presented, to some extent, the Southern view. This section has not enjoyed, to the same extent as the North and West, the increased railway facilities for which they are eager, and are willing to see anything done to impede their progress. Referring to the benefits conferred by the roads, the senator said that when the first railroad was built between Liverpool and Manchester, Eng., a lot of two and a half acres of land, where Atlanta now stands, sold for a horse, saddle, and bridle; on that lot there is now \$15,000,000 worth of prop-

erty. This difference is mainly due to the effects on trade and production of the roads. It was easy to excite the unreasoning prejudices of the people against the roads, but the Senate was a cool, deliberate body, not to be so readily moved. He believed that in consolidation was the real cure of any evils that might exist, not competition. He deprecated the discouragement of railway building; the North might have enough, but the South were still needing them. Driving the roads into bankruptcy would only irreparably injure the interests both of inter-state and foreign traffic.

OPPOSITION TO THE HENNEPIN CANAL.

As was expected, when the appropriation bill came up on Feb. 14, the Hennepin Canal a point of attack by those whose opposition is based on the desire to have the Okobojehatchie Creek duly recognized by an appropriation. Parties who are perfectly willing to throw away \$7,000,000 on Galveston Harbor, and to pave the bottom of the Mississippi River with silver dollars, oppose the Hennepin canal because it does not happen to lie within their own Congressional district or state.

The assumed ground of objection to the Hennepin Canal is that it is wholly within the state of Illinois. What of it? Some of the creeks and salt licks that have received appropriations have been wholly within single states. We can name any desired number of such instances. Every fair-minded, broad-minded man must admit that the proposed route of the Hennepin is along the greatest line of travel and transportation in this country. It would benefit not Illinois so much as it would the entire Northwest.

And suppose the principal benefits were to be derived by Illinois. Objections to appropriations of public money come with a bad grace from the representatives of states where, for instance, the postal service is carried on at a dead loss to the government, which loss is made good by Illinois and a few other states.

Illinois has paid over \$300,000,000 of internal revenue to the government. She pays more each year than any other state. She pays more than fifteen other states that might be named, combined. If this whole question of appropriations is narrowed down, as one opponent to the Hennepin Canal put it, "to a division of the pork," Illinois will not be content with the trotters when she has fed the hog. Nor will the Northwest.

The gentlemen who represent Skootarawas Creek and Sponge Harbor may assume this as a fact.

THE president of the Grain Sealing Co. of New York, Mr. W. E. Ferguson, has recently published some statistics as to the American foreign shipping, stating similar facts to those which will be found elsewhere in this issue. He states that of 1,120 steam and 101 sailing vessels that took cargoes of grain from that port last year, only two small sailing ships were American, and carrying only 69,354 of the 45,000,000 bushels of grain exported. Some thirty or more years ago we had the lion's share of this traffic; now our shipping is confined almost entirely to the coasting trade. The investment in great steamships has not offered sufficient inducements to American capitalists for building them, and they have been left to the Englishmen and Germans to supply. This is due, says the writer, to the sharp taxation, both local and federal, that they are compelled to submit to here, which is done according to the vessel's value, and not, as by England, to the value of its earnings. President Ferguson does not go into details, but indicts our whole system of finance in this regard as destructive of this, one of the most valuable of our possible industries, for which we have every possible natural and mechanical facility. He strongly favors rebates on duties on shipments in American registered vessels, as a stimulant to their increase, and as shown in the result of the policy of Mexico, etc. Every reasonable effort should be made to promote the revival of this once flourishing American industry.

Editorial Mention.

It is said that one grain commission firm at Duluth cleared \$100,000 above expenses in 1884.

C. F. MELVIN, of Oakfield, N. Y., is seeking an opportunity to enter the grain business in the West.

PAPERS like the New York Times are blind to the interests of their own community when they oppose the Hennepin Canal.

SOME of the Minnesota legislators wish to make an error of judgment on the part of an elevator man a criminal offense.

AND once more all the peach trees have been killed by the cold weather. This is about the thirtieth time that this disastrous event has happened within our personal recollection.

As a prominent elevator builder says elsewhere in this issue, no better time to build or refit elevators could be wished. Material, labor, and machinery are all at bed-rock prices.

THE movement of wheat in the Northwest continues very light. At Chicago, receipts, both of corn and wheat, have fallen to about zero. One day the total receipts were only eighteen cars.

A self-registering weighing machine is advertised in this issue by Messrs. C. Reuther & Reissert, of Hennef, a. d. Sieg, Germany. This machine can boast of medals received at various exhibitions, and Messrs. Reuther & Reissert wish to secure competent agents.

W. G. ADAMS, of Sandwich, Ill., is well and favorably known to the craft throughout the West, and is one of the wide-awake business men who let their light shine and reap benefits as well as confer them, by their course. Mr. Adams has a full-page valentine for our readers in this issue.

HAVE the farmers taken to doctoring barley? It would seem so from recent developments. A consignment of barley was recently received here under circumstances which would seem to point to that conclusion. The honest farmer "gets onto" ways that are dark with surprising rapidity.

ONE of the best-known manufacturers of elevator machinery in the West is R. M. McGrath, of Lafayette, Ind., whose corn shellers and cleaners are widely used and appreciated. Mr. McGrath manufactures and deals in warehouse machinery of all kinds, and will be pleased to correspond with any who have requirements in his line.

THE National Board of Trade met in Washington on Jan. 28, 29 and 30. It adopted the usual number of excellent recommendations to Congress, all of which will probably be ignored. What are the business interests of this country in importance compared with the improvement of Squeedunk Creek, anyhow? To use the language of the poet, Congress is a ass.

IN our "Editorial Mention" of our January issue the case of Wm. O. Manson, of Waverly, Ill., vs. Joseph T. McCord & Co., commission dealers on the Chicago Board of Trade, was stated, with the verdict of \$25,000, allowed by the jury to Manson. A fuller statement of the case shows that these transactions were, in a large number of the deals, of the nature of "cross-trades." Judge Smith, in charging the jury, said that the brokers had no legal right to set off one trade with another, ordered by different parties, but that both must enter the market independently. Therefore, in the case above, wherever

it was clear that losses had occurred in the regular course of trade Manson's margins must cover them, but where these were from cross trades the defendants must meet the loss. Of the \$36,000 claimed, the jury awarded the above sum to plaintiffs.

THE large advertisement of M. Halliday, 218 E. Ninth street, New York City, can hardly have escaped the attention of the reader. Hr. Halliday is sole proprietor and manufacturer of Dugan's Patent Slate and Standards, which are used for a variety of purposes, and can be attached to all kinds of roofs. Notice the descriptive cuts in the card in this issue.

THE reader is referred to the advertisement of the Union Foundry and Pullman Car Wheel Works, whose office is in the First National Bank Block of this city, and whose extensive works are at Pullman. This concern manufactures largely all kinds of elevator machinery, including steam shovels, buckets, and all iron work used in elevators. They solicit correspondence from interested parties.

ON Jan. 19 the mammoth elevator at Fort William, Ont., was completed, which was celebrated by a dinner given to the officials, contractors, etc., by the citizens. This elevator, built by the C. P. Railway Co., has a capacity of over 1,000,000 bushels. The company has done a large amount of work in improving the harbor and erecting docks at that point for the benefit of the grain traffic.

THE statement of Senator Van Wyck, of Nebraska, that it took 150 bushels of corn to buy a ton of hard coal in that state, is regarded as an enormous exaggeration not likely to encourage immigration. But some writer says it was a no bigger lie than his statement that Vanderbilt could buy out that state and Kansas and have \$40,000,000 left. To do this he would have to be worth some \$1,000,000,000.

A MEAN act of petty spite was done by President Cheney, of the Lake Erie & Western Railroad, aimed against R. H. Godman, of LaFayette, Ind. Godman sued the company for discriminating against him, and in revenge Cheney ordered the side track at Godman's elevator, at Montmorenci to be torn up. It is just such fool acts as this that will bring about disastrous legislation. The railroads must understand that they cannot do such high-handed things as that.

THE Merchants' Exchange, of Buffalo, N. Y., adopted a resolution on Feb. 3 directing the Transportation Committee to take measures at once for securing increased facilities for the delivery of grain at that port. The Lake Shore and the Nickel-Plate Roads are desired to open the City and Tift Elevators on the east side, and the Central and Grand Trunk on the west side are requested to enlarge their elevator facilities also. The roads are asked to make their freight rates from the West cover the elevator expenses.

MR. W. W. OGILVIE, the noted miller of Winnipeg, has been visiting all the elevators of his company in Manitoba, and reports that they have bought about 2,000,000 bushels of wheat this season, and we think that the farmers still hold fully one-third of their crop. They are well satisfied with results, many of them telling him that they cleared \$1,000 to \$1,500 last year, while they say that they are much better off than the farmers of Dakota and Minnesota, as they are getting ten to fifteen cents per bushel more for their wheat. This is attributed to the Canadian duty of fifteen cents per bushel on American grain. The company buy largely in Duluth for foreign shipment, getting wheat for twelve cents less per bushel than at Port Arthur; they have completed bonded arrangements whereby they can ship the grain via the latter point, and they expect to ship in this way a large amount of American wheat, as they

can make better arrangements at Port Arthur than at Duluth. They have made arrangements to extend their elevator system west to Regina, and have purchased the lumber for the South-western extension, which will require a house every ten miles on account of the increasing density of population.

THE annual report of the Board of Grain Inspectors, of Dakota, is very full and exhaustive. The present wheat crop of the state is estimated at 26,000,000 bushels, with quality well sustained. The aggregate elevator capacity of the state is 6,000,000 bushels; the total shipments of wheat through elevators and warehouses were about 11,200,000 bushels. Much the largest amount is done by the large elevator companies, but there are other warehouses at most of the grain centers of the state. Their capacity is below the requirements of the trade.

THE demand for metallic roofing and covering for buildings is increasing every year, and iron-clad buildings are now common everywhere, although a few years ago they were rarely met with. This is particularly the case with elevators. One of the largest and best-known firms engaged in the manufacture of sheet-iron roofing and siding is the Porter Iron Roofing Co., of 101, 103 and 105 West Front street, Cincinnati, Ohio, who need no introduction to our readers. The Porter Co. will be pleased to send their descriptive circulars to parties who wish to investigate the subject.

THE rapidly increasing business of the Harrison Conveyor Co. has compelled them to seek more commodious quarters and increased facilities for manufacturing their conveyor; and they have arranged with the well-known firm of Borden, Selleck & Co., 92 and 94 Lake street, this city, to take the general agency and exclusive manufacture of their conveyor. With the ample capital and enterprise of this establishment, coupled with the old management of the Conveyor Co., all of whom are retained, the Harrison promises to become still more popular, and it is safe to predict a prosperous future in store for a device which is constantly being applied to new uses.

WE clip from the *Chicago Evening Journal*, of the 21st ult., the following complimentary notice of the well and favorably known commission house of Chandler-Brown Co.:

Chandler Brown Co., of this city and Milwaukee, is one of the largest and most substantial receiving firms doing business on the Board of Trade was established in 1863, and has gained a national reputation for strict integrity and exceptional business sagacity. The house has a large receiving business and rapidly increasing order trade in grain, seeds and provisions in Chicago, and also at Milwaukee. The Chicago house is now and always has been under the personal supervision of Mr. J. A. Brown, who is regarded as one of the shrewdest and at the same time one of the most scrupulously honorable gentlemen on 'Change. The house is strictly first-class.

THE Dakota grain inspectors made very thorough investigations of the numerous complaints made as to transportation and grading of grain. The evidence showed that there were many abuses, but whether due to ignorance and want of judgment was uncertain, while willful extortion was not to any extent proven. The facts led to the recommendation of legislation on the matter. The subject of grading is an intricate one, and the board thinks that the best of codes would be valueless without an official and reliable board of appeals, which they advise should be created by the state, with sufficient intelligence, practical experience, and power to arrange the details of tables and grades satisfactorily to all reasonable parties. At the meeting of farmers at Grand Forks, Dak., a year ago a vast amount of testimony and affidavits were presented on the special cases of wrongs claimed to have been done by the elevator men. Much was found to be trivial and contradictory; there was an evident incompetency in many cases on the part of the local agents. No charges of any consequence were sustained of willful wrongs.

RAILWAY RATES AND WHAT CONTROLS THEM.

In view of the fact of the present eagerness of the farmers to obtain stringent legislation on the matter of the railway transportation of breadstuffs, the *Pioneer Press* gives a dispassionate and clear statement of the lessons that should be learned from the results of twenty years' observation and discussion from a consideration of the inductions thus obtained. Two propositions become at once self-evident from these facts: The laws of competition, as related to the real business interests of the roads, constantly and steadily have reduced the freight rates, with no reference to state interference, to a point far below what any community would previously have asked, and tend constantly to the minimum of profitable operation; and that the arbitrary interference of the state in the regulation of the rates has always been followed by an arrest of this natural decline and been injurious to the interests that make the demand.

As an illustration of the first statement: In 1872 the freight rates on grain from Chicago to New York were 12.1 mills per ton per mile. Two years later Mr. Windom, before the State Senate Committee on Transportation, recommended that the government should run competing lines with double tracks from the Mississippi to the seaboard, as the only method by which a reduction of rates could be obtained to a rate not to exceed 7.5 mills; and yet, without any such immense undertaking, within ten years the rates have been through the action of the natural competing causes reduced to 4.4 mills, one third the earlier rate and less by 40 per cent. than the scheme anticipated with the aid of government. The official statements recently made to legislative committees of Minnesota roads show that the reductions of the last two years lowered the amount of the gross receipts of Mr. Hill's lines by the sum of about \$4,400,000, compared with the results of the rates of 1882. But the granger mind does not see these facts, and decries roads as huge monopolists, extortionate and arbitrary, and demand meddlesome legislation, whose effects would only be to interfere with the natural tendencies to a decline in rates and only react injuriously on the farmers. State commissions may properly adjudicate individual instances of complaint and local discriminations, unjust charges, etc., but no interference with the rules of general management can be other than unwise and disastrous.

An article in the May issue of the *North American Review* treats this subject very comprehensively on the same line of thought. The writer deduces from careful observation four propositions that seem reasonable and self-evident. The first states the general law as to the tendency of competition on the use of capital in all investments as obeying the laws of natural competition; but one of these laws most clearly shows that all risks increase the loan rates of capital, and the danger of government interference is of the nature to enhance the risks of roads and thus increase the cost of the use of their capital. This has always, it is claimed, been the result of such interference in transportation. The second proposition repeats what we have stated above as to the effects of the competition of roads more numerous than can be controlled by any one combination, and especially of the natural ally of the farmer and shipper, the great waterways. The third proposition has been often presented and is obviously true, viz.: The effects of the competition of the great centers of trade is to decrease rates. Each of these competing points looks for their final terminus mainly abroad, say, Liverpool, and they must offer freight rates that are equalizing in their effects on the values of the grain scattered all through our country, if they would have the benefit of its handling and shipment. On account of this necessity the average grain freight rates on Minnesota roads are less than on the roads of Kansas, Iowa, Wisconsin, etc.

The fourth thesis may be considered by far practically the most important of these propositions: The railroads, just as wholesale dealers in merchandise, etc., increase their profits with the increase of their business in much larger ratio,

which is obtained by cheapening rates to the lowest profitable figures. As an example, the writer states that the Pittsburgh & Ft. Wayne Road in 1875 carried about 491,300,000 tons of freight at the rate of 1.111 cents per ton per mile, making a net earning of \$2,060,000; in 1880 this road carried some 806,260,000 tons at .91 cents, earning nearly \$3,300,000 net. This principle, thus easily established, works with far more activity and extent in the newly-opened districts of the country where every stimulus is required to increase the density of settlements and their productive industries to make transportation of any relative value. The prosperity of the roads depends on the prosperity of the producers, and their own interest leads them to the utmost endeavor to sustain and encourage the latter. Let the state then, says the *Press*, pursue the course already marked out, give publicity and redress to cases of extortion or wrong of any kind, while in no way interfering with the natural course of competition and varied interests, and, as has been shown to be already proven, better results for the farmer and communities will be obtained than by meddling, unwise legislation.

MR. HILL ON RAILWAY REGULATION.

The Committee on Transportation, etc., of the Minnesota House, on Feb. 5 reported a bill regulating transportation corporations, recommending it as a substitute for all others presented hitherto. This bill provides for an act creating a commission regulating transportation by railways prescribing their powers, duties, and some rules of evidence relating to legal actions. It is very full, containing twenty-nine sections, and in brief may be said to have embodied all the restrictive and positive regulations of the roads that have been produced in the past few months by the prolific, disgruntled granger intellect. That it will not, except with great modifications, pass, would seem to any dispassionate reasoner certain; but what the results of the discussion will develop, time only can answer. In lieu of the present railway and warehouse commissioner, the bill creates a board of three members, to be constituted at first by an appointment of two others by the governor and cabinet, who with the present commissioner, shall act until the next general state election, whereat the three commissioners shall be elected with the other state officers, one of them to serve two, and the other two four years. This board are salaried and have a salaried clerk; are provided with stationary, etc., free passes on the roads in the state, ample powers to fulfill all their numerous duties, involving thorough examinations of everything related to the stock, ownership, operation, etc., of the roads, and ordering that one of its members shall go, at least once every three months, to the counties which have roads. The duties involve the preparation and publishing in one of the St. Paul papers a schedule of maximum freight and passenger rates, which publication shall be a *prima facie* basis for court action. The roads are put under a long series of restrictive rules, and positive enactments as above stated, and are obliged to present an annual report as to their entire affairs and answer any questions proposed, to the commissioners; the latter in turn make an annual and full report to the governor, and as frequently as he may demand, of all matters under their charge. Large bonds are required while the bill offers ample penalties for the violation of the law by any parties concerned. The law covers all firms, associations or persons acting as common carriers, whether incorporated or not.

On the evening previous, at a called joint meeting of the committees on transportation of both houses, with other legislators and prominent railway and business men to discuss the Illinois laws, President J. J. Hill, of the Manitoba Road, was heard at length on the subject in general. Much of what Mr. Hill presented of fact and deduction has been already fully published in our columns, and in another part of this issue will be found many of his propositions. Among the former were the facts as to the varying nature of

the obligations and expenditure of the roads making a class of "fixed expense" far larger than in any other business, with a wide range of parties and persons to whom these are due and their conditions of need.

The question of the relation of tonnage to the various articles carried, to any reasonable, reflecting mind, was a proper and necessary subject of freight rate discrimination; tea and wheat could not be placed on the same level. A very important factor in the situation of the roads at present is the indiscriminate building of roads in advance of the wants of the community. These were in the end largely sacrificed in their sales, and became the subject of stock speculation and disastrous factors, in healthy competition. The capacity required can do a stated amount of transportation at less cost than too large an amount. This principle has been recognized by the Legislature of Massachusetts. In such cases the weaker roads eventually are purchased by the stronger in self-defense, who thus have an undesirable elephant of huge dimensions to manage.

The speaker said that he was willing the state should make any regulations it saw proper if it would simply guarantee the roads a net profit of 6 per cent. on actual cost, and a fund sufficient for maintenance and renewal. Mr. Hill restated the patent fact that the whole world of producers and shippers, with the transportation companies, were suffering alike from an overstocked market everywhere, which would not take the perishable breadstuffs only at prices generally below the cost of production. The history of the whole past proves the perfect worthlessness, and, worse of all, legislative attempts to overcome such conditions. All other industries and business are alike suffering; while the farmers of Minnesota are learning the old law as to the final results of the one-crop dependence. In this cold Northwestern section this dependence on the one-crop system compels the farmer to make, with some four and a half months' labor, his full annual expenses; this can only be in exceptional times and cases. This matter was illustrated from the history of the Genesee Valley (N.Y.), Southern Minnesota and elsewhere, of a resort to varied agriculture in the rapid increase of the value of farms and the prosperity of their owners.

The president then treated the subject of the rules made by the companies as to the minimum capacity of public elevators, namely, 30,000 bushels, was simply to provide houses of sufficient size simply for grain men to clean and handle the wheat conveniently; anything less in furnishing two or three days' storage and in handling the grain profitably, would be too small. In the month of November his company received 1,300,000 bushels of wheat, or an average for each elevator of 11,000 per day; this enables the farmer to store his grain, if cars are not on hand, and go home. The expense of such an elevator is \$3,000, or if flat, \$2,000, built of plank. The speaker was always willing to erect such elevators at the lowest cost price, but thought that railway officials should have as little as possible to do with grain outside of their special province.

As an important factor of that problem peculiar to the new sections of the West, is the fact that farmers generally are not supplied with granaries or wheat-cleaning facilities as are those of the older sections of the country; not 10 per cent. of the farmers of Northern Minnesota having granaries, clearly necessitates that the storage and cleaning capacity be adequately supplied by the warehouses, if the grain reach the foreign markets at all, or get any reasonable grade. An intelligent law might, says Mr. Hill, regulate this matter, with such provisions as to prevent unjust dockage, and at the same time allow a just compensation for plant and labor to the elevators, some of which the speaker detailed.

Mr. Hill stated that his road reduced in August last the rates 10 per cent., which applied to the entire wheat crop of that section. Tables were presented showing that the Minnesota rates were less than those of Missouri, Iowa, Illinois, Massachusetts, and several other states. The facts were also given as to the injurious effects shown in the past history of all legislative interference

with this business, while, it was said, \$160,000,000 of railway capital in the state is watching such action as of vital importance to their existence and operation. All legislation is not opposed; rather wise regulations are desired, but hasty and specific laws will at length be disastrous to all the interests concerned.

A GRAIN CASE.

The case of the First National Bank, of Joliet Ill., vs. H. S. Carpenter & Co., commission merchants, of Joliet, Ill., which occupied the Circuit Court of that city the first week of February, has been decided in effect favorably to defendants. The case is of general interest to the trade and presents the following salient points: During the winter of 1883-4, the firm of Jones & Woodruff, who are the real plaintiffs, stored in the Joliet Elevator some 60,000 bushels of corn from Kansas, at the time of receipt looking plump, good, and far superior to the average corn of that crop. In the spring the attention of Woodruff was called to the fact that this corn was getting out of condition, and he and Mr. Carpenter, with whom a contract was in progress, visited together the house and made an inspection. Mr. Woodruff pronouncing the grain all right. Sundry notices, visits and talks occurred later.

At this time Woodruff, having a July contract on the Chicago Board of Trade, shipped some of this corn to fill it, which, as he stated, was taken at No. 2. After various negotiations the parties met at the office of Carpenter and completed the contract on June 20, as the defendants state, and bring evidence to prove that Woodruff then showed a telegram just received from Chicago, stating that the corn had graded all right. As some of the corn was admittedly injured, the contract was completed on the basis of 54 cents per bushel for the lot, including four cars on track. On June 28, Carpenter learned that 50,000 bushels received in Philadelphia of this corn had been pronounced off grade and hot. There were still some 12,000 bushels in elevator. Three of the notes, aggregating in all \$22,341.82, had been paid, and there remained the one note in suit, \$7,348.82, unpaid. The defendants show that Jones was in Chicago on June 20, and requested Marsh, their broker, to conceal the real inspection. The plaintiffs deny that the telegram was presented as stated; they claim that the contract was completed on June 19. The verdict of the jury deducted some \$1,500 from the note. This is claimed as a legal victory for the defendants, and that the plaintiffs are not entitled to anything, in spite of the jury's assessments.

A GRAIN DEALER'S SUIT AGAINST A RAILROAD.

A suit of very general interest to the grain trade was brought on Feb. 5 in the County Court of Lafayette, Ind., by R. H. Godman vs. the Lake Erie & Western Railroad Co. This suit was brought to recover damages by the plaintiff, an extensive grain buyer and shipper, amounting in this case to \$30,000 on account of discriminations favorable to his competitors secretly going on for a term of years, whereby said Godman has lost largely the fruits of his industry and business skill in obtaining patronage during eight years of operation. This, it is understood, if successful, will be followed by other suits to recover \$135,000.

Stripped of legal prolixity and verbiage the averment of plaintiff shows that since a certain day in October, 1879, the defendants have owned and operated a railroad from as far west as Bloomington, Ill., to Sandusky, Ohio, passing through LaFayette and other named localities; that said road had made arrangements with other Eastern lines whereby they were able to furnish through bills of lading for produce, etc., to the prominent seaboard ports, such as Boston, New York, Philadelphia, Baltimore, etc., and they gave a schedule of prices to these ports and such other points East as had the same freight rates. The complaint then specifies in detail the years, months,

and amounts of shipments, aggregating many million pounds of grain in which shipments were made by plaintiff to each of these Eastern ports, at freight rates paid according to the published schedule; that at the same periods of time, and to the same ports, the firms of Higbee & Co., and Bartlett, Knight & Co., competing grain buyers, also shipped grain in varying amounts; that the said shipments were made with bills of lading bearing on their face the same rates as published; but, as plaintiffs have learned within the past twenty days, with a secret arrangement whereby there was to be a rebate made for said firms of five cents per hundred pounds shipped in each case, thus permitting them, by illegal and unjust discrimination, to enter the common markets with advantages damaging the interests of plaintiff to the amount, as above stated, of \$30,000. Legal talent as counsel has been retained by both parties, and the suit will be watched with the deepest interest by roads, grain dealers, etc.

WE WEEKLY SUGGEST.

Suppose the Solons and Lyncurguses of Minnesota and Dakota embody the following points in "a bill to regulate elevators":

That state inspection be established at great receiving points like Duluth, Minneapolis and St. Paul.

That every elevator owner or agent shall give the farmer a receipt stating the number of bushels and the grade thereof, the farming fixing the weight and grade.

That the elevator man shall ship the same to any market the farmer shall designate, the farmer to stand the expense.

That if grade or weight be found deficient at the places where inspection is established, the farmer shall be fined not less than one hundred dollars and imprisonment for not less than 30 days, or both, at the option of the court.

The above is as practicable and just as some of the bills introduced.

THE SITUATION IN THE NORTHWEST.

The shower of bills relating to the railroads and the inspection of grain in the Northwest has not yet been disposed of by the legislatures of Minnesota and Dakota. Some of them are purely chimerical schemes brought forward by demagogues to please their constituents, others have merit. The recommendation of the Minneapolis Chamber of Commerce is the most equitable. In substance it is as follows:

That we advocate and recommend a system of public elevators under such bonds and restrictions as shall render them absolutely open and free to all buyers and sellers of grain; that their receipts shall be made negotiable, and that grades shall be guaranteed at the primary receiving markets of Duluth, Minneapolis and St. Paul under an equitable state supervision of inspection. That we advocate and recommend such modifications of the laws governing chattel mortgages on growing crops as to protect innocent purchasers of grain after the same has been delivered for storage and receipts issued therefor, for the following reasons, viz: The holder of a chattel mortgage on grain having a supposed lien upon the property, wherever the same may be found, thereby preventing innocent purchasers from being secure against attachments, it practically prohibits all safe negotiation of country elevator receipts.

At sundry public meetings at prominent grain points in Dakota, the views of Manager Manvel and General Freight Agent Mellen have been made public as follows: The policy of these roads in permitting the erection of public elevators by such companies as the Pillsbury & Hulbert, etc., has been entirely for the mutual benefit of all the parties interested. No special privileges not open to any other companies were given, while the same conditions were required of them, among which are that these elevators shall be public, and afford at all times storage to farmers of lots either small or large, and the privilege of shipment or sale at will. Agent Mellen says: Our cars will be placed at farmers' disposal at as low rates as any other shippers obtain; it is the interest of the roads to have a fair deal. A. C. Bird, Freight Agent of the C. M. & St. P. Road, said that they would not refuse the use of cars to any farmer when they could be

provided. There are, it is well known, emergencies that cripple the powers of the company at a given time; there was, however, no guarantee that the cars should be supplied as cheaply as to shippers from the public elevators. The state grain inspectors say that the only cure for these evils complained of as to discriminations is a "free open market." This means the privilege of shipping to any point desired, with car and track facilities, at the same prices as the larger shippers. The great law of supply and demand will regulate the whole matter.

SOME of the boys in the wheat pit on the Board were having quite a time the other day when two of them gave Ed Brown a push, which caused him to fall, slightly injuring himself. The next day Brown did not appear, and some of the boys fixed up a bogus telegram from Highland Park, saying that Brown was dangerously hurt from his fall, and would be confined to his bed for several weeks at least. Thereupon the two pushers were smitten with remorse, and sent him a telegram of apology and remorse, costing them a couple of dollars. In the afternoon the first man they met at Board was Brown, who had been let into the joke. Thereupon remorse left them, and revengeful feelings took its place.

A recent work by Mr. Chas. Marvin on a kindred subject contains a chapter on the effects on the Russian grain trade of the railway developments of India. The wheat exports of Odessa were valued at \$15,000,000 in 1862, and had increased in 1882 to \$50,000,000, that country supplying largely England and Europe. The effects of the Turkish war in 1877 injured Russia and benefited America in that traffic, and her exports of grain fell off from 180,000,000 to 104,000,000 bushels in 1880. Meanwhile the Indian railway extensions have brought her grain into competition with Russia, which is largely dependent for its prosperity on this traffic. This is in part the cause of the Russian advance in Asia, as the cheap wheat of India threatens a crisis in her markets.

RECENT reports from the press of St. Petersburg, Russia, indicate that the present railway extensions in that country are changing the points of grain shipments entirely. Less than twenty years ago 25 per cent. of the total Russian grain exports were sent from Odessa, while now the percentage of that port is only 17, the difference going via Baltic ports. Taganrog, it is said, has declined still more; her supply has sunk from over a section of 200 miles' radius a few years ago to some fifty miles to-day, the rest going by rail to northern ports. The Baltic reports, published quite reliably in London, are essential therefore to the correct ideas as to the Russian grain trade of Chicago speculators, as too much importance is attached to the decline of the exports of the Black Sea, while, as London has the grain trade of Riga, Konigsburg, etc., her reports bear to that country a parallel relation to that of Liverpool to this continent.

WHY GRADES GO DOWN.

The *Pioneer Press*, in reply to the question, Why do the grades of wheat go down? gives a tabulated statement taken from the record of the Pillsbury & Hulbert Elevator Co., comparing the gradings at the points of shipment with those at Duluth of the same grain. The table presents twenty lots, sent from eight different stations. At the point of shipment these lots received the uniform grade of No. 1, three being hard. Of the latter the Duluth grade was the same for two lots, but fell to No. 2 hard for one of them. Of the whole the Duluth grade was No. 2 in thirteen of the twenty. There were special causes to some extent in the shifting system at Duluth, at the time pretty well crowded with wheat. While in the early part of the season, when everybody wants wheat, inspectors are apt to be loose. The table shows a loss on thirteen lots, and no gain on any. This company say that they lost \$40,000 last year in grades. The farmers are the ones who get the advantage, those only suffering loss who raise the best hard wheat; such persons would be benefited by raising the standard, and this kind of work ought to have a premium.

Fires, Casualties, Etc.

House & Dudley, grain dealers of Lathrop, Mo., were burned out recently.

D. H. Huntoon's elevator, at Earling, Iowa, was destroyed by fire recently.

The elevator of Hoag & Steers, at Cedar Falls, Iowa, has been destroyed by fire. Loss, \$10,000.

A. J. Brown, a grain dealer at Mt. Vernon, Dak., committed suicide on Feb. 4; cause not stated.

J. M. Robertson, of the lumber and grain firm of Bailey, Dye & Co., of Waseca, Minn., died recently.

The large elevator at Big Stone City, Minn., burned recently, together with 4,000 bushels of wheat. Loss, \$14,000.

The elevator of Atkinson & Co., at Jewell Junction, Iowa, was burned on the night of Jan. 30. It was insured for \$2,500.

The Thorndyke elevator, at Ortonville, Minn., of 50,000 bushels' capacity, was recently burned, containing 6,500 bushels of grain.

According to the New York *Chronicle* there were four grain elevators burned in the United States during the month of October, 1884.

According to the New York *Chronicle* there were six grain elevators burned in the United States during the month of November, 1884.

The elevator and mill of Priest & Gordon, at Mt. Pulaski, Ill., were burned recently. Estimated loss, \$25,000; insurance, \$24,000.

The Pillsbury & Hulbert elevator at Georgetown, Minn., was burned on the morning of Jan. 19, with 20,000 bushels of wheat. The elevator will be rebuilt.

Flint & Holton's grain elevator at Belleville, Ont., was burned on Feb. 11, along with their steam saw and planing mills. The loss was about \$20,000; insurance, unknown.

A large fire at Dodge City, Kan., on Jan. 18, among many other buildings, almost totally destroyed the warehouses of Morris, Collier & Wright, and of Beverley & Co. The insurance was not ascertained.

On the night of Feb. 7 one end of the storehouse recently erected at Duluth, Minn., for temporary storage, burst, spilling about 5,000 bushels of No. 1 hard wheat; it was soon gathered up at a trifling loss, and the house repaired.

The storehouse owned by John D. McAuley, of Trenton, Ont., containing over 15,000 bushels of grain belonging to Messrs. Matthews, of Toronto, was burned Feb. 1. The building, valued at \$2,500, was insured for \$1,000 and the machinery for \$400. The grain was fully insured.

The distillery of Messrs. Monarch & Co., at Owensboro, Ky., was set on fire by the heating of a lot of grain bags on the morning of Feb. 11. This was the largest south mash house in that district of Kentucky and had a capacity of 15 barrels per day. The loss was \$40,000; insured for \$6,000.

About 9 o'clock on the evening of Feb. 8, three of the boilers in the Firminich Starch Factory, Peoria, Ill., exploded with such force as to wreck the building, and carry fragments a distance of 300 yards. Two men were at the time in the building; they were Ephraim Doolittle, fireman, and Andrew Byer, watchman. On the 9th both bodies had been found, badly mangled, about eight feet in front of the location of the boilers. The beer-runner of the distillery was still missing. Loss is estimated at about \$100,000; the insurance is \$40,000 on distillery, \$3,500 on starch works, and \$8,000 on stock. It is supposed that the cause was due to some boiler imperfection, notwithstanding they had stood the test. These works, erected about a year ago, gave employment to some 100 men; they were built by Dr. Firminich, formerly of Buffalo, N. Y., who ran a distillery in connection last year, but in the beginning of the present year sold out to a whisky pool.

SAMPLING WHEAT.

"I beg your pardon, sir; but I have often seen you fellows with these sticks and little bags and always wondered what they could be used for."

The above remark was made Saturday by an elderly gentleman to a young man on Third street and Third avenue South.

"Why, you see—but if you're going up town, let's walk along—fearful cold weather this?"

"Yes, but about the stick?"

"O! the prod. We sample cars of wheat with these. You see this cup on the bottom? Well, this is plunged down into the wheat, then the string is loosened off from the top here, the stick pulled out and then the cup hauled up by the string full of wheat from the bottom of the car. See!"

"What do you do with it when you get it?"

"One of these little bags is filled with wheat from all parts of the car, taken up to the chamber of commerce and the car sold on the merits of the sample."

"Ah! I see."

"Then sometimes we have wheat shipped in and then we have to try it to see that it is not 'set up.'"

"Set up; what's that?"

"Well, sometimes the smart ones in the country will put soft wheat in and cover it up with hard and try to palm the whole off as hard wheat."

"Are there many ways of setting up a car?"

"Just as many as there are buyers. I found three cars set up this week, one had about ten inches of soft wheat in the bottom and then was filled the rest of the way with hard. Another had a layer of about fourteen inches sandwiched in between layers of hard. The third one and probably the most difficult to detect was loaded to swindle—fifteen or twenty bags were placed separately in the car, all standing on the opened end. Then the car was filled with hard wheat to the level of the bags, when the bags were carefully raised, the wheat was carefully left in the same position as if the bags were still around—then hard wheat was spread over the top, leaving a car of No. 1 hard nicely plugged with thirty to forty bushels of soft wheat."

"Does it pay shippers to set up cars?"

"No; honesty is the best policy in loading cars. They may get one or two cars through, but when the inspectors get on to it the shippers will lose grades all the rest of the season."

"Lose grades! What's that?"

"O! the inspectors give the buyers the benefit."

"What do you dealers think of a man who doctors his cars?"

"They think him a fit subject for Stillwater or St. Peter. Say, do you know where they generate cold? No. Well, you go up some raw morning and stand on the railroad track, back of Elevator A 1 and 2, and if you don't come to the conclusion that you have struck the manufacturing center, then I give it up."

"Pretty cold job then, getting samples?"

"You bet; a fellow might look around a long while before he found a colder place to put his feet than in a car of wheat."

Then they parted, and the reporter heard no more.—*Minneapolis Tribune.*

THE ILLINOIS GRAIN INSPECTION AND WAREHOUSE LAW.

The present Illinois system of grain inspection under state control was inaugurated in 1871, under some opposition on the ground that it would become a political machine, and with effort at times, notably in 1874-77, to have it rescinded, which failed. It has proven a remarkably successful system, and is looked upon as a model by other grain centers and states. A writer from Chicago thus particularizes the plan:

Under the present law the railroads have no option in the delivery of grain, but are compelled to deliver at whichever warehouse they may be ordered to do. Expert inspectors examine the quality of the grain on the car, by comparison and various processes known to experts, and in case it is wheat it is weighed, and a certificate is issued as a guaranty of the grade to which the grain is qualified. The car is "carded" on the way to the elevator, where other inspectors examine the grain to see whether they agree with the inspection on the track. If there is a disagreement between the results of the experts the shipment is held out and reported, and entries are made upon the books giving the reasons for fixing the grade to which it has been assigned. The rules of the department prevent the plugging of cars, and any cars which have been plugged are invariably graded at the lowest grade. The house inspector examines all shipments of grain and returns a certificate to the shipping office to show in what condition the grain was when received. If it is found to be out of the condition it should be according to the order for shipment it is switched off the track and reported at the office from which it is shipped. All grain intended for the elevator is inspected in the yards and forwarded.

If the parties to whom the grain is consigned are not satisfied with the original inspection, they can order the cars held out and summon the appeals committee, which consists of three members of the Board of Trade, whose judgment in the matter is final. All grain which comes to Chicago is inspected, and if not suitable for warehouse grade it is sold on the track. In fact, a great quantity of grain is inspected and sold on the track which never goes into the elevator. As an evidence of the popularity of the method of inspection, all grain which passes through Chicago is inspected in order to have a judgment of the grade, although it may be shipped immediately to other points. Grain which is stored in the elevator loses its identity, but the owner is given a receipt, for which a like amount of the same grade is delivered. These certificates are negotiable, and are accepted as good as gold for what they call for. The superiority of the present system over the old one can be seen at a glance when it is considered that under the old system inspectors were appointed by interested parties, and as a consequence there was great prejudice in the grading. Under the present system the inspectors give bonds to cover any damages that may result from false inspection. The experts are all men who have occupied a large part of their career at the business, and they have variously served from eight to twenty-two years. Whenever a complaint has been made to the appeals committee that the grade of grain had been placed too low, the committee have seldom found cause for raising the grade. The number of appeals in which the committee differ from the original inspection, Mr. John W. Parker, of the chief inspector's staff, states, will not equal one-

third of one per cent. of the number of appeals made, and the entire number of complaints are comparatively few.

The rules governing the inspection of grain are adopted by the railway commissioners, and cannot be changed without twenty days' notice. They are never arbitrarily made, but the interest of trade in all its bearings, and all parties in any way interested, are consulted in the formation of rules. This is of itself an immense advantage to shippers, buyers, or sellers, as it prevents the possibility of manipulation or changing the grades of grain in the warehouses, as was frequently the case under the old system. The great difficulty to the inspectors arises from what are termed "line" cars, which contain grain neither good enough for a higher nor bad enough for a lower grade. Between two distinct grades it is not hard to distinguish, but it is very difficult to decide upon the quality of these grades which appear on an uncertain line half way between. All of the pressure from receivers comes from this source, and the judgment of the inspectors is often challenged, although they are nearly always proved correct by the committee on appeals. The trouble of inspecting is augmented to some extent by dealers, both city and country, endeavoring to manufacture grades to meet the requirements of the rules. This is sometimes attempted by mixing two or more grades, but is unsuccessful. The State Warehouse Commissioner is appointed by the Railway Commissioners; he keeps a register of all the grain that passes through the Chicago elevators, and the exact amount that was in the city the day previous can be ascertained each morning, and is by law published weekly. All warehouse receipts require his registering and canceling before they will be marketable.

GRAIN SHIPMENTS FROM NEW YORK IN 1884.

William E. Ferguson, President of the Mutual Grain-Sealing Company, has compiled statistics of the shipments of grain from this port for 1884, which were as follows:

Steamships.	No.	Bushels.
British.....	661	25,033,842
German.....	216	6,442,343
Belgian.....	73	5,074,773
French.....	65	2,283,770
Dutch.....	54	1,917,564
Danish.....	28	1,388,205
Italian.....	16	498,463
Spanish.....	5	214,863
Portuguese.....	2	107,469
Totals.....	1,120	42,961,799

Sailing vessels.	No.	Bushels.
Italian.....	35	417,604
Austrian.....	24	744,385
Portuguese.....	24	442,022
Norwegian.....	9	254,815
British.....	3	143,167
American.....	2	64,354
German.....	2	35,094
Swedish.....	1	23,010
French.....	1	12,537
Totals.....	101	2,431,988

The total shipments of grain from New York for 1884 aggregated 45,393,787 bushels, as against 48,457,945 in 1883. In 1884 1,221 vessels were required, while 1,256 were employed in 1883. The various grains shipped in 1884 were: Wheat, 28,102,185 bushels; corn, 9,798,819; rye, 4,945,266; oats, 2,482,196.

A CORN HUSKING MACHINE.

An ingenious invention of large promise is said to have been in process of testing for some months at Lincoln, Neb., the results of the reflections of a young man, Mr. S. F. Mouck. The statement is made that this machine will be able to gather and husk corn in the field at the rate of ten acres per day, and it has been patented. A reporter of the *Lincoln State Journal* describes the affair as a light, two horse-machine, pushed like the header in front of the team. It straddles the row taking one at a time; between the wheels, which resemble those of the mower, are two large rollers placed lengthwise to the row. Two devices, one in front of each, push the stalks down between the rollers; they are simply crooked arms, working eccentrically, so as to catch both the standing and fallen stalks. The stalks pass between the rolls, leaving the ears in front. The latter are then turned crossways of an elevator a little wider than an ear of corn is long; rollers under the ears revolving toward the left, keep the ears pressed against that side of the elevator, a little distance up where is a knife that cuts off the stem of the husks as they move on. They then come upon a set of rollers revolving in the opposite direction, and another knife, farther on, cuts the other end of the husks which are removed by passing over jagged rollers. At the end of the rollers a fan blows back the husks and chaff, and the ears drop into an accompanying wagon. The machine tested is imperfect in construction but is said to demonstrate its perfect feasibility. The inventor until within a few months, has been a resident of Colorado, where for the last five years he was engaged in mining. The idea of the machine occurred to him there, where he also secured his patent. The machine, with capacity estimated as above, will require two teams and two men, doing about five times the work of the old plan. Eastern capitalists are said to desire to buy the patent outright.

WAREHOUSING AND INSPECTION.

The bill introduced by Mr. Bradford to regulate the warehousing and inspection of grain, and which is said to have received the approval of the state grange, seems in the main to have been well considered, and to satisfy most of the requirements of a wholesome system of state inspection. It is, nevertheless, encumbered with provisions which are likely to be found in practice either superfluous or mischievous, and in some cases both the one and the other. It provides first of all for licensing all grain warehouses—an indispensable foundation of any system of state inspection; requires the warehouseman to receive and store all grain offered if he has room for it; for its inspection by a duly authorized inspector; and for the issuance of a warehouse receipt for all grain received, stating the quantity and grade of the grain—which receipts are transferable. It provides for the appointment of a warehouse commissioner by the judge of each judicial district, to be a member of the State Board of Warehouse Commissioners. The board is required to establish the grades of wheat to be known as the Minnesota grades, to make all necessary rules for the weighing and grading of grain, to appoint semi-annually a chief inspector and a chief weighmaster, who are to appoint a sufficient number of assistants. The duties of chief weighmaster are to be confined to Duluth, Minneapolis, and St. Paul, where he and his assistants are to supervise the weighing of grain and the inspection of scales; the chief inspector to inspect and determine the grading of grain and to assign a deputy wherever he deems it necessary, both classes of officers being required to give bonds. It provides for appeals from the decision of the inspectors to the board of warehouse commissioners; makes the maximum of all elevator charges, including insurance, two cents per bushel, or two and a half for damp grain. There are a lot of penal and other provisions, embracing matters of administrative detail; but these are the main features of the bill. It is difficult to see the necessity of the class of officers called weighmasters. The chief inspector and his deputies, one would suppose, could easily perform all the duties assigned to the weighmasters, provided the requirement was added that all warehouse scales must be sealed. The omission of this is a serious defect of the bill. To vest the appointment of warehouse commissioners in the district judges seems an easy way out of a serious difficulty. It is perhaps more likely to result in meritorious appointments not controlled by political influences. On the other hand, there is the serious objection to loading the judicial office with executive functions. The objection is so grave that it needs separate discussion. The bill embraces a multitude of minor regulative details which might more properly be left to the warehouse commissioners. These are empowered to establish all rules for the inspection, weighing, and grading of grain and the management of warehouses; but it does not appear that anything is left for them to do in this line. It is obviously important that the inspectors should have power at all times to test and examine scales, but the additional provision that any owner of grain may do this will not bear discussion. The simple requirement that the scales must be sealed and that any tampering with the seal would be severely punished, must render these vexatious precautions superfluous. The object to be attained is a competent and honest inspection and uniform grading under the standard fixed by law, so that the warehouse receipt given the farmer shall represent the full amount of the weight and quality of his wheat, and be good for it against that elevator in any market in the state—that is to say, gives him the benefit of a free and open market. It seems to us that these ends could be attained by a much simpler bill than Mr. Bradford's and with a much less elaborate apparatus. But it is the nearest approach to rational legislation on this subject which has thus far appeared on the files of either house.—*Pioneer Press*.

RAILWAY RATES.

The Appleton (Minn.) Press publishes some statistics supplied by W. N. Severance, showing that the rates of the Northwestern Railroads have been higher and have not declined as much as those of the East. The following facts are stated: In 1868 the New York Central charged 2.743 cents per ton per mile, and in 1880 the rate had been reduced to .880 cents. On the Pennsylvania and the Pittsburgh, Fort Wayne & Chicago Roads, the reduction was .880 cents in 1880 from 1.906 in 1868. On the Chicago & Northwestern the reduction was 1.49 in 1880, from 3.168 in 1868. On the Milwaukee & St. Paul 1.76 in 1880 from 3.10 in 1868. The average freight charges on fifteen leading roads in 1868 was 2.453 cents, and in 1880 1.056. Freight rates on Eastern roads were reduced about 66 per cent., while the rates on Northwestern roads during the same time were reduced only about 50 per cent. In 1880 Eastern roads carried three tons of freight the same distance for about the same rates that they charged for one ton in 1868. The general average of wheat rates on the Hastings & Dakota Road, on which Mr. Severance lives, is 1.030 cents per ton per mile. At Mitchell, 837 miles from Chicago, the rate is 35 cents per 100 pounds; and from Milbank, 611 miles from Chicago, the rate is 34 cents. The rate is the same from Aberdeen as from Mitchell, although the distance is 168 miles less. Mr. Severance claims that by the transit system the wheat and flour rate from Minneapolis to Chicago is lower than on any of the Eastern roads mentioned. The average rate at which transit is sold is given at 14 cents,

which is too low by 1½ cents, as the average price of transit is 15½ cents per 100 pounds, when the flat rate is 17½ cents. This discount is a direct loss to the shipper who makes it up by reducing the price of wheat in the same proportion. Granite Falls pays nearly double per ton per mile for wheat shipments to Chicago that Minneapolis shippers do, although the difference is only 120 miles. The rate from Appleton to Chicago is 31 cents per 100 pounds for 57 miles, while the rate on flour from Appleton to Minneapolis is said to be 20 cents for 157 miles.

Mr. Boyden, the freight agent of the Northwestern, states that the Western railway rates are as low as the Eastern, when the average earnings are compared. The freight earnings of the New York Central, 1,018 miles, were, in 1881, \$8,378 per mile; Pennsylvania Railway, 1,120 miles, \$8,340 per mile; Erie Railway, 1,010 miles, \$5,151 per mile; and the C. M. & St. P., in and for the state of Minnesota, 1,003 miles, only \$2,117 per mile—as stated in their report for 1883, including freight and passenger. The rates of the Milwaukee & St. Paul in 1880 were within one-fifth of a mill of being double the amount per ton per mile on the roads leading east from Chicago.

THE OLIVER BILL.

The following is the full text of the Oliver Bill which has passed the Dakota House:

1st. That all persons, firms or corporations operating a railroad in this territory, shall receive and transport grain, or other freight, in bulk, in carload quantities, from any person, firm or corporation, at any station or siding from which it is customary to ship grain or freight, and shall deliver the same to any person, firm or corporation to whom the same may be consigned, at any regular station to which said persons or corporations shall run trains. Provided, such consignee, or the elevator or warehouse, can be conveniently reached by any track owned, leased or used by such person or corporation; and provided, further, that such railroad corporations may make rules and regulations requiring cars to be loaded within twenty-four hours after being placed at the disposal of the shipper.

2d. That all persons, firms or corporations shipping grain or other freight shall be charged the same rates of freight for same kinds of grain, in carload lots, from the same station to the same station; and no rebate shall be allowed to any person, firm or corporation.

3d. That all persons, firms or corporations operating a railroad in the territory of Dakota shall keep posted in each of their freight offices their rates of freight on grain, or other freight, in carload lots, from that station to every other station to which it shall be customary to ship grain; and whenever the rate shall be changed the new schedule shall be so posted.

4th. That any person, firm or corporation operating a railroad in this territory that shall refuse or neglect to provide, within a reasonable time, such car or cars as shall be demanded by any person or corporation, for the shipment of grain or other freight in bulk, shall forfeit and pay to the party aggrieved the sum of one hundred dollars (\$100) for every car so refused or not provided, to be recovered by the party aggrieved in an action brought in any court having jurisdiction of the amount; and any person or corporation that such railroad corporation or company shall cause to pay a greater rate of freight for the shipment of grain or other freight in bulk, in carload lots, than said railroad company shall collect from any other person or corporation, on like freight, between the same stations, shall be entitled to recover from said railroad company, for each car on which such greater rate of freight shall have been collected, as aforesaid, in the sum of one hundred dollars (\$100), to be recovered by the party aggrieved, in an action brought in any court having jurisdiction of the amount.

5th. The provisions of this may be enforced by the supreme and district courts, by the writ of mandamus.

For Sale.

A BARGAIN.

One new Hutchison Dustless Corn Sheller, capacity, from 75 to 100 bushels per hour. Regular price, \$125. Will deliver on board cars for \$90. Address

ALPHA, care AMERICAN ELEVATOR AND GRAIN TRADE Chicago, Ill.

ELEVATOR FOR SALE.

A very desirable elevator property, thoroughly equipped with machinery, sheller, dumps, scales, etc. in Western Iowa, where the country is full of grain, just ready for market. Full particulars given on application. Address

A. M., care AMERICAN ELEVATOR AND GRAIN TRADE Chicago, Ill.

FOR SALE.

An elevator, situated on the Chicago & Rock Island Railroad, at Van Meter, Iowa, twenty miles west of Des Moines, Iowa. Capacity, 25,000 bushels. Twenty-five-horse power engine. New corn sheller, and a 3½-foot French burr for making bolted meal and feed. Elevator in good repair. Address

LAMOINE MOTT, Des Moines, Iowa.

FOR SALE IN NORTHWESTERN IOWA.

A new steam elevator of 10,000 bushels' capacity. Well fixed; with fanning mill, flax cleaner, and two sets of elevators. New engine and boiler. Office and warehouse. Lots of flax can be loaned in the spring. Will also sell a new house of four rooms on opposite side of the street. A country with a radius of ten miles all around contributory. All for \$2,000. Address

STEAM ELEVATOR, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

Special Notices.

The Chicago Scale Co. sell Scales of all kinds also Portable Forges and Blacksmiths' Tools of all descriptions at about one-half usual prices. Buyers will save money by sending for their Price List.

The Cambridge Roofing Co., of Cambridge, Ohio, have their different styles of roofing and siding exhibited on a building 100x40 feet at World's Industrial and Cotton Centennial Exposition, being held at New Orleans, La. They also have a stock on hand there for sale, and all parties wishing to purchase or obtain agency can do so by seeing their agent, who will be found in the building marked with their name.

R. JAS. ABERNATHEY,

General Agent for the Barnard & Leas Mfg. Co. for Kansas, Western Missouri and Southern Nebraska. Address,

Box 880, KANSAS CITY, MO.

Grain Commission Cards.

C. F. LISTMAN & CO.,

COMMISSION MERCHANTS,

48 Metropolitan Block,

FLOUR AND GRAIN. CHICAGO.

Liberal Advances on Consignments.

Highest References.

WARNER & WILBUR,

—GENERAL—

Commission Merchants,

Cor. La Salle and Randolph Sts.,

Room 28, Metropolitan Block, CHICAGO.

Consignments Solicited. GRAIN and SEEDS a Specialty.

Satisfactory References Furnished.

G. B. KIRKBRIDE.

M. W. YERXA.

YERXA & KIRKBRIDE,
Grain Commission

HARD MILLING WHEAT A SPECIALTY.

Liberal Advances made to Shippers.

MINNEAPOLIS, MINN.

DULUTH, MINN.

ESTABLISHED 1866.

J. VAN WINT,

Grain and Flour Agent

ANTWERP, BELGIUM,

REFERENCES AND CABLE CODES FURNISHED.

W. W. DAVIS,

GRAIN COMMISSION,

Room 24, METROPOLITAN BLOCK,

DULUTH, MINN.

Advances on Consignments.

KANSAS CORN.

FRENCH BROS.,
KANSAS CITY, MO.
Grain Commission Merchants.

OATS.

RYE.

KANSAS WHEAT.

Grain Commission Cards.

M. J. FORBES.

GEO. SPENCER

GEO. SPENCER & CO.,

DULUTH, MINN.

GRAIN ON COMMISSION.

DULUTH HARD WHEAT

A Specialty.

ORDERS FOR CARGOES SOLICITED.

A. J. SAWYER,

Duluth, Minnesota.

SHIPPING

AND

GRAIN COMMISSION

Elevators on Line of N. P. R. R.

BUCKLEY, PURSLEY & CO.,

(Successors to Buckley & Co. and Thos. J. Pursley.

Grain Commission Merchants

Room 10, Chamber Commerce, PEORIA, ILL.

Returns prompt. Correspondence invited. Best market in the world on low grade corn. Charges for selling very small. References: First National Bank, Mechanics' National Bank, Peoria, National Bank, Callender, Ayres & Co.'s Bank.

N. A. SANBORN,

Receiver and Eastern Agent
FOR SALE OF

WESTERN GRAIN, FLOUR, BRAN, FEED,

Seeds, Pork, Beef, Lard.

Office, No. 1 Exchange Street,

PORTLAND, MAINE.

Grain Commission Cards.

ESTABLISHED 1865.

L. EVERINGHAM & CO.,
Commission Merchants,

125 La Salle Street,

Adjoining Chamber of Commerce. CHICAGO.

Consignments Solicited of Grain, Flax, Seeds,
Selling by Sample a Specialty.

The Purchase and Sale of Grain and Provisions on the
Chicago Board of Trade, for Future Delivery,
on Margins, a Specialty.

Dealers in Grain and Provisions cannot afford to do without their carefully prepared and unequalled Crop Reports, which, with their Special Information indicating courses of markets, have been verified in numberless cases, and which are freely furnished upon request.

H. H. CRANE,

Broker in Grain and Mill Feed,

Room 8, Chamber of Commerce, PHILADELPHIA.

Orders Solicited to sell Car Lots by Grade or Sample on a Brokerage for account of Western Shippers. Correspondence Invited. Reference, Commercial National Bank, or any member of the Commercial Exchange.

GOODRIDGE, FIELD & CO.,

GRAIN AND FLOUR,

NORFOLK, VA.

Business attended to at Newport News (Eastern Terminus
C. & O. Railroad).

H. W. ROGERS.

JAMES C. ROGERS.

H. W. ROGERS & BRO.,

Grain and Seeds

COMMISSION MERCHANTS,

—ROOMS—

33 & 35 Metropolitan Block,

CHICAGO.

Grain Commission Cards.

ESTABLISHED 1863.

CHANDLER-BROWN CO.

Grain, Seeds and Provision

Commission Merchants,

CHICAGO —AND— MILWAUKEE.

Correspondence and Consignments Solicited.

W. P. ANDREWS,

Commission and Shipping Merchant,

Room 59 Board of Trade Building,

BUFFALO, N. Y.

Consignments Solicited, and Liberal Advances Made.
CORRESPONDENCE INVITED.

UNSOLICITED

AND POINTED.

GLASCO, KANSAS, January 4, 1884.

Barnard & Leas Mfg. Co., Moline, Ill.:

GENTLEMEN—After having used your *Victor Corn Sheller* and *No. 1 Improved Corn Cleaner* in our elevator for some six months, we wish to congratulate you upon furnishing the *ne plus ultra* of Corn Shellers and Cleaners.

We have never used the equal of the machines you furnished us. They do their work to our entire satisfaction. Very respectfully yours,

W. R. WEST & CO.

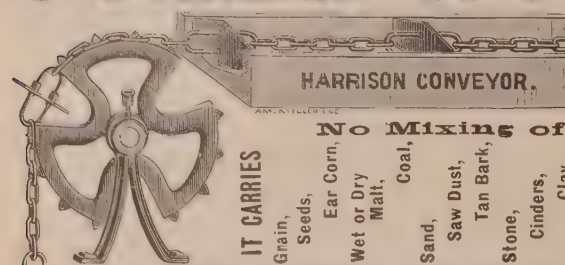
BALTIMORE, Md., January 29, 1884.

Barnard & Leas Mfg. Co., Moline, Ill.:

GENTLEMEN—Your draft in payment of No. 3 Warehouse Separator and Grader purchased of you, was presented several days ago, and paid. The machine gives us great satisfaction, and we unhesitatingly say that we believe it to be the *best* one in the market for cleaning and grading *all kinds* of grain. We shall take pleasure in recommending it to any one wanting such a machine. Our only regret is that we did not get one of double the capacity. Very respectfully,

SWIFT & LUCY.

CLEAN WORK!



HARRISON CONVEYOR.

ALL WROUGHT IRON.

No Mixing of Grain.

IT CARRIES
Grain, Seeds,
Ear Corn,
Wet or Dry
Malt.

Coal,
Sand,
Saw Dust,
Tan Bark,
Stone,
Cinders,
Clay,
Bricks,
Boxes,
Blocks,
Packages,
Paper Pulp,
Cotton Seed,
Etc., Etc.

SEND FOR CIRCULAR AND PRICE LIST.
BORDEN, SELLECK & CO., Gen. Agts., 92 & 94 Lake St., CHICAGO, ILL.

N. A. HALDEMAN & CO.,

—MANUFACTURERS OF—

IRON ROOFING AND SIDING!

Jobbers in Felt and Rubber Roofing, Building Papers, Iron Ore Paint, and Cement.

SEND FOR CIRCULARS AND PRICE LIST.

1221 Main St, WHEELING, W. V.



Elevator AND Mill Supplies

Leather, Cotton, Rubber

BELTING

Elevator Buckets, Bolts, Mill Irons, Etc

Prices Close, and Quality the Best.

THE CASE MFG. CO., Columbus, O.

POPULAR, RELIABLE, USEFUL

Barnet's Commercial Dictionary


"A Dictionary with Legal Notes, for Commercial Use throughout the United States." It is an Encyclopedia of the laws of business as well as a Dictionary, containing an Appendix of Foreign Coins, Forms, British, Metric, and United States Weights and Measures. Read what the press says editorially: A commercial dictionary which will prove valuable to lawyer as well as to merchants and everybody else. Legal notes are added to the definitions, the authorities quoted being standard, and it has the indorsement of men eminent in the profession.—*Chicago Tribune*.

Aside from its practical value it suggests numerous subjects for inquiry which business men frequently neglect until they suffer a loss through their negligence.—*Chicago Evening Journal*.

A convenient, explicit, and trustworthy guide on the topics included in its pages.—*Chicago Times*. Hand-book size, 252 pages in neat, substantial binding. Price only ONE DOLLAR. Sent post-paid on receipt of price, by

Mitchell Bros. Company,

184 & 186 Dearborn St., Chicago, Ill



"THE ECLIPSE"
A VISIBLE FEED LUBRICATOR
FOR STEAM ENGINES, PUMPS,
AND LOCOMOTIVE AIR BRAKES
BRONZED \$600 NICKELLED \$800
J. VIN. RENCHARD
DETROIT MICH. & WINDSOR, ONT.

SHIELDS & BROWN,
78 & 80 Lake Street, - Chicago, Ill.

MANUFACTURERS AND SOLE PROPRIETORS OF
BRADLEY'S



FOR BOILERS AND STEAM PIPES.

Reduces Condensation of Steam.

FOR GAS AND WATER PIPES.

Prevents Sweating and Freezing.

The best Non-Conductor of Heat and Cold in the World.

Send for illustrated descriptive Circular, and name this paper.

T. M. NAGLE,

ERIE, PA.,

Manufacturer of

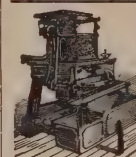
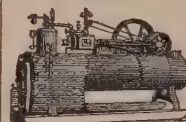
Portable,

Stationary

and

Agricultural

Steam Engines.



"MOORE COUNTY GRIT"

Corn-Mills and Millstones,

ALL SIZES.

THE BEST IN THE WORLD

FOR TABLE MEAL!

Samples of Meal Sent on Application.

NORTH CAROLINA MILLSTONE CO.

Chambersburg, Pa.

(Please Mention this Paper)

SUBSCRIBE FOR

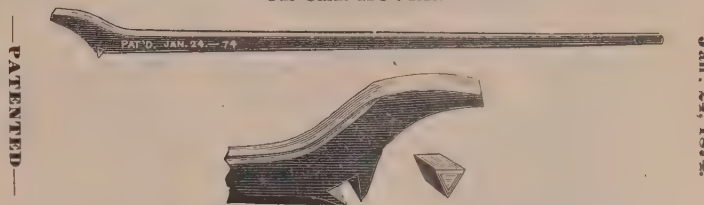
"The American Elevator and Grain Trade,"

ONLY ONE DOLLAR PER YEAR.

Address **MITCHELL BROS. CO.,** 184 and 186 Dearborn St., Chicago.

THE RUTHENBURG AUTOMATIC
FIRE EXTINGUISHING & ENGINEERING CO.
 OF CINCINNATI, O. U. S. A.
CONTRACTORS FOR THE COMPLETE
EQUIPMENT OF FACTORIES & MILLS. ALL KINDS
AGAINST FIRE.
ABUNDANT WATER SUPPLY. NO FREEZING.
INSTANT ALARM. LOW INSURANCE.

WARRANTED ALL STEEL.
The Champion Pinch Bar
OR CAR MOVER.



With Adjustable Hardened Steel Grip, made of superior quality of steel, which can be reversed when one edge is worn smooth, and replaced with a new one when all three are worn off.
 Price, \$5.00 each, including one extra Grip; price of Grips, 35 cents each, or three for \$1.00.
 Weight, 15 lbs.; length, 5 feet. We claim for this Bar the following **Advantages**, which will recommend it to all practical users: The entire Bar is made of **Steel**; will work on any style of brake or wheel, and between cars, getting its purchase from the rail to the wheel; it will not slip on ice or grease; one man can easily move any loaded car with it. Address
WEBSTER & COMSTOCK MFG. CO., 125 & 127 Ontario St., Chicago, Ill.

JOHNSON & FIELD,

MANUFACTURERS OF THE

Dustless GRAIN Separator

EMBODIES MORE POINTS OF EXCELLENCE

Than any other machine now offered for similar purposes. **Light Running, Large in Capacity, Perfect in Separation, and with great Strength and Durability.**

These machines have no equal. **Adopted and Indorsed** by many of the largest mills and Elevators in the country.

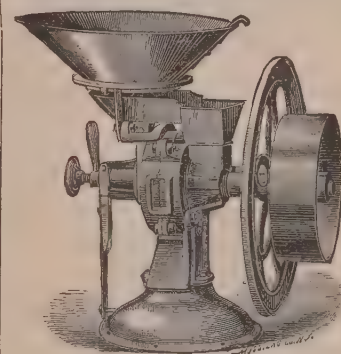
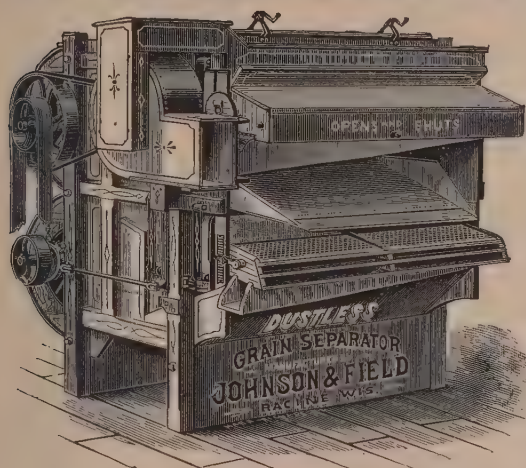
AS A GRADER IT HAS NO EQUAL.

Made in Different Sizes to Suit Different Requirements.

Send for Circular, with Testimonials and Prices. Address

JOHNSON & FIELD, - - RACINE, WIS.

[We can Vouch for the Reliability of this Firm.—Publishers.]



QUAKER CITY

Double Reduction Grinding Mill,

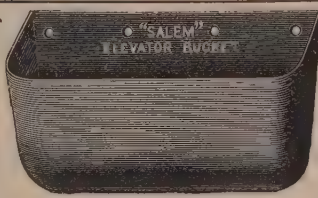
For Corn and Cob, Feed and Table Meal.

This mill received the First Premium at the Pennsylvania State Fair 1894. Send for Circular.

A. W. STRAUB & CO.,

3737 Filbert St., - Philadelphia, Pa.

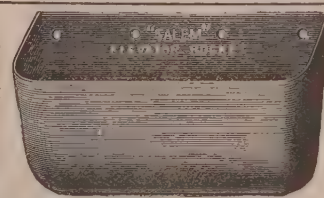
W. J. CLARK & CO.,
Sole Manufacturers,



SALEM, - OHIO



Thornburgh & Glessner
Gen'l Agents



CHICAGO, ILL

S. E. WORRELL'S IMPROVED GRAIN DRIER

—AND—

COOLER.

THE BEST MACHINE MADE for this Purpose. Been in Successful Operation Two Years.

DRIES DAMP GRAIN for $\frac{1}{2}$ cent per bushel. **COOLS "HOT" GRAIN** for $\frac{1}{4}$ cent per bushel. For full description see illustrated article in January number of this paper.

Read the Following Commendations:

"We have had ample means of comparison, as at the same mill and elevator they have a steam drier and an oven shelf drier or kiln. They find yours does **more** work and **better** work than either. Though previously suspicious of the new-comer, they pronounce it **the best**. We unhesitatingly recommend it as the most perfect machine for the purpose of which we have any knowledge."

ZELL & DANER.

Baltimore Engineering Agency.

"I have had unusually good opportunities of judging the merits of this machine, having seen wheat rejected on account of dampness put through one operation on his machine and sold for good merchantable wheat, and put in high grade flour. I recently visited his Drier, which he was operating on some very damp, musty and dirty wheat, which was delivered from the Drier wonderfully improved—clean, free from smell of must, and in good milling condition, without any appearance of being scorched. This is a practical, economical machine, and of great value to the grain interest."

T. M. TATLOW, Head Miller,
Empire Milling Co., Hannibal, Mo.

"We have seen this machine in operation and are highly pleased with the results. It not only dries the grain, but cleans, removes the must and greatly improves its appearance. We consider the machine a valuable one, and are glad to recommend it to any one interested."

CARTER, PINDELL & CO.,
Proprietors Eagle Mills, Hannibal, Mo.

Drier furnished Complete, ready to set up. Send for Descriptive Circular and Prices.

S. E. WORRELL, Hannibal, Mo.

Flexible Grain Spout!

FOR TRIMMING CARS.



With this Spout you can load a car without shoveling, and it is the best Spout for general use in the market. Will work well in any kind of an elevator, and is designed expressly for loading where there is but little fall from bin.

H. SANDMEYER & CO.,

119 & 121 S. Adams St., Peoria, Ill.

—MANUFACTURERS OF—

Grain Spouts, Elevator Buckets

GALVANIZED IRON CORNICES, IRON SKY-LIGHTS,

Tin, Iron and Slate Roofing.

Corrugated

Iron Siding

ETC.



ESTABLISHED 1851.
NORDYKE & MARMON CO.,
INDIANAPOLIS, IND.,



MANUFACTURERS OF
Elevator Machinery,
Shafting, Shellers, Pulleys, Wheat Separators, Belting, Engines, Scales, Conveyors, Wagon Dumps, Elevator Cups.
24 Sizes and Styles of
PORTABLE CORN MILLS.

Working plans furnished for all sizes Grain Elevators. Send \$20 for a set of drawings for our \$1000 elevator. Capacity 5000 bushels. House, engine and machinery all included.

Established 1868. **PERFORATED METALS.** Incorporated 1879.

For Use
in
Mills,
Elevators
and
Ware-
Houses.

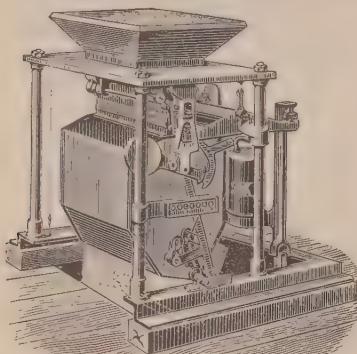


For
All Kinds
of
Grain-
Cleaning
Machin-
ery.

Circulars; Samples and Prices on Application.

The Robert Aitchison Perforated Metal Comp'y
74 East Van Buren Street, CHICAGO, ILL.

GOLD AND SILVER MEDALS IN 1883 AT BOSTON, AMSTERDAM AND RIGA.



—Patent Automatic, Adjustable and Controllable—
Self-Registering Weighing Machine
—FOR—
Wheat, Malt, Grain and Seeds of all Kinds, for Grain Warehouses, Silos, Customs, Flour Mills, Oil Mills, Breweries, Malt Houses, Distilleries, etc.

Great Saving of Labor and Time. Automatic, and therefore the only reliable System of Weighing and Recording.

COMPETENT AGENTS WANTED.

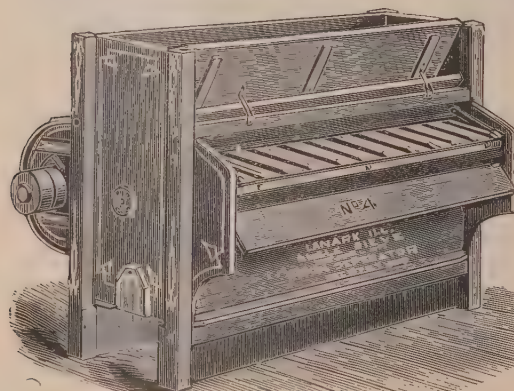
—Full Prospectus from—

C. REUTHER & REISERT, - HENNEF, A. D., SIEG., - GERMANY.

THE ANGLE SIEVE GRAIN SEPARATOR

(D. T. Weed and H. A. Webber's Celebrated Patent.)

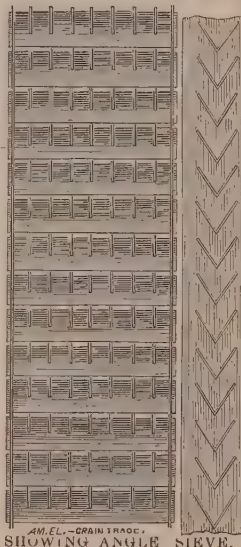
The CHAMPION of the WORLD.



Everybody is astonished to see the work it does. We challenge competition, for general cleaning purposes. We CAN and WILL separate oats and wheat raised together, the first time through the Separator, and make it fit for market, and not run any wheat over in the oats. No other Separator can help running wheat over, where the suction or blast is depended on to make the separation, which we claim is not the correct principle of separation. The peculiar construction of the sieve, and the motion of it, do the work. We can take oats out of barley just as well, though not quite so fast. No other Separator attempts to do this. We can also clean buckwheat, flax, rice or any other small seeds that any other separator will handle.

WRITE FOR CIRCULARS AND PRICES.
Address the Manufacturer,

D. T. WEED, { ONE OF THE PATENTERS, } Lanark, Carroll Co., Ill.



AM. EL. - GRAIN TRADE. SHOWING ANGLE SIEVE.

CHAMPION OF THE WORLD !

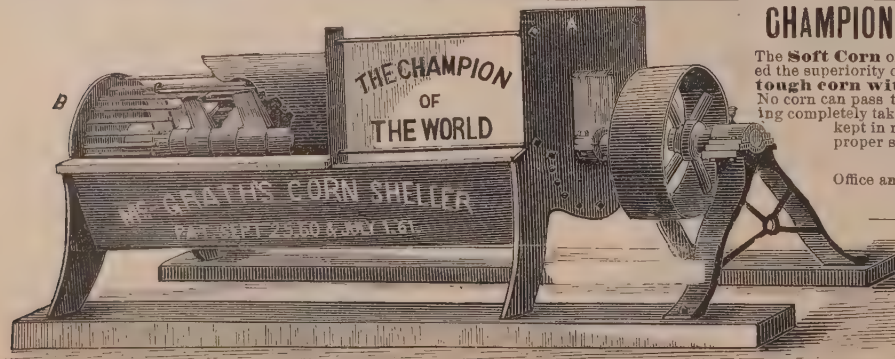
The Soft Corn of this year has again demonstrated the superiority of the "Champion" in shelling tough corn without breaking the grain. No corn can pass through this Sheller without being completely taken from the cob, if the machine is kept in reasonable repair, and run at the proper speed. Address

R. M. McGRATH,
Office and Works, 136 & 138 S. Third St
Lafayette, Ind.
—Also Manufacturer of—

McGrath's Hornet

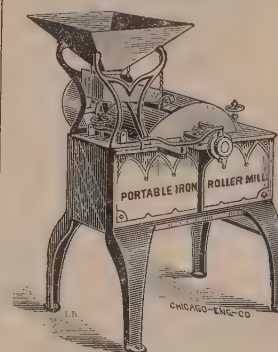
AND
McGrath's Twin Corn
Sheller and Cleaner.

McGrath's Pat. Grain
Dump. Also Shafting,
Pulleys, Hangers and
Warehouse Machinery
of every description.



IRON FRAME MILLS!

FOR ELEVATORS AND WAREHOUSES.



CHEAP,
SIMPLE,
DURABLE
Efficient,
Less Skill,
Better
Work.
NO
DRESSING
BUHR'S.
FROM
\$65.00
UPWARD.
The
Portable
Iron Roller
Mill Co.

103, 105 & 107 W. Monroe St., Chicago.

The Oldest and Largest Manufacturers in the
United States of

VULCANIZED RUBBER

In every Form, adapted to MECHANICAL PURPOSES.



Machine Belting
with
Smooth Metallic Rubber
Surface.

Steam and Water Hose,
PLAIN AND RUBBER LINED.

RUBBER "TEST" HOSE, made of Vulcanized Para Rubber and Carbolized Duck; Cotton "CABLE" HOSE, Circular, Woven, Seamless, Antiseptic, for the use of Steam and Hand Fire Engines, Force Pumps, Mills, Factories, Steamers, and Brewers' use.



CAR SPRINGS
OF A
Superior Quality,
And of all the various Sizes used.

Original Solid VULCANITE EMERY WHEELS.

Large Wheels made on Cast-Iron Centre if desired.

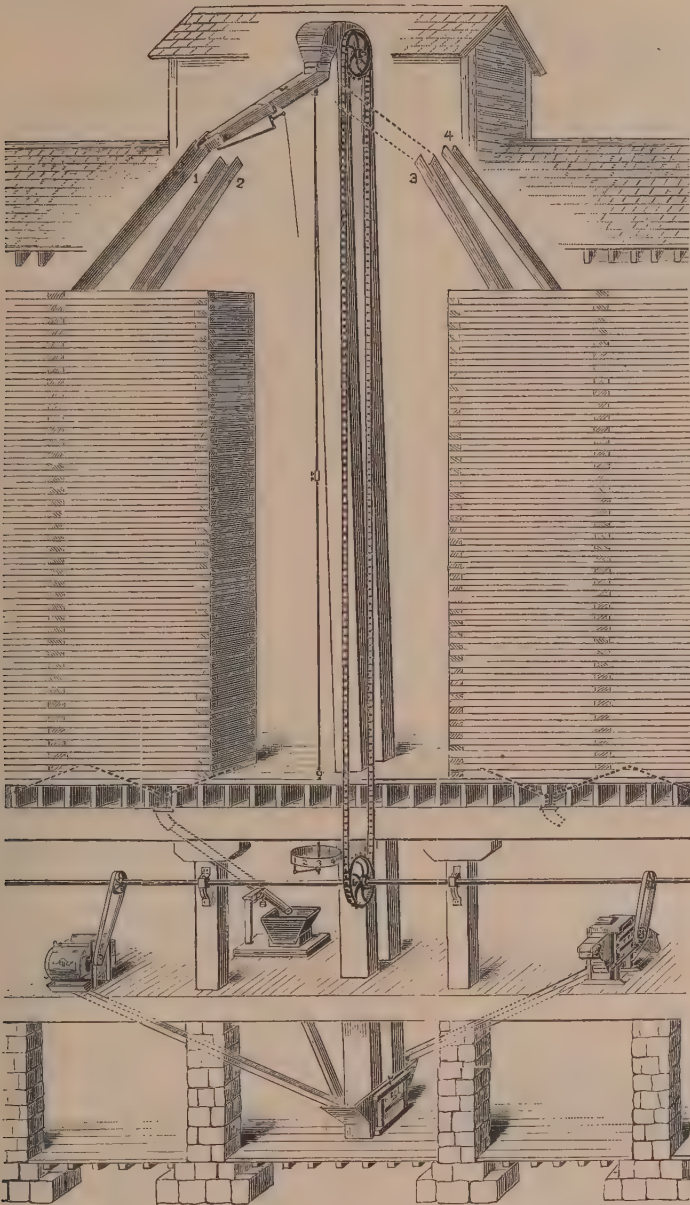
PATENT Elastic Rubber Back Square Packing.

BEST IN THE WORLD for Packing the Piston Rods and Valve Stems of Steam Engines and Pumps.



CORRUGATED Rubber Mats and Matting,
For Halls, Flooring, Stone and Iron Stairways, etc.
NEW YORK BELTING AND PACKING CO., WAREHOUSE
15 Park Row, N. Y.
BRANCHES:
308 Chestnut St., Philadelphia.
151 Lake St., Chicago.
52 & 54 Summer St., Boston.

JOHN H. CHEEVER, Treasurer.
J. D. CHEEVER, Dept. Treasurer.



W. G. ADAMS,

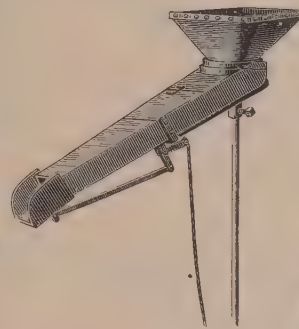
—Manufacturer and Dealer in—

ELEVATOR MACHINERY!

And Supplies of Every Description.

I have **Superior Facilities** for the manufacture of **Shafting and Pulleys, Hangers, etc.**, of the latest and most approved patterns. Below are cuts of a few of the Specialties of my manufacture. Believing that I can make it to your advantage to write to me for Special Prices before placing your Orders, I solicit your correspondence.

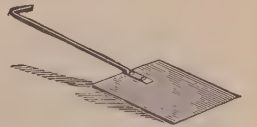
Office and Works, - - SANDWICH, ILL.



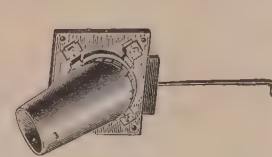
Crane Spout for Head of Elevators,



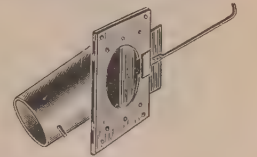
Swivel Spout and Gate No. 1, for Bottom of Hopper Bins.



Swivel Spout No. 2, Top and Bottom View.



BUCKET BOLTS.



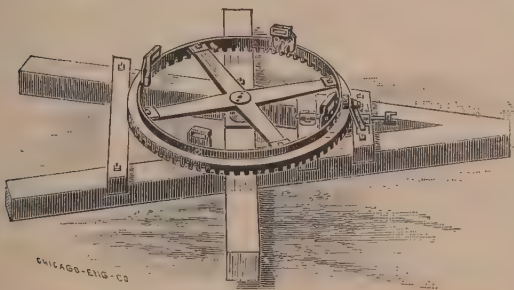
Dump Gate, For Scale and other Grain Hoppers.



Swivel Spout No. 3. Made to fit any Wooden Spout.



Rivet and "Salem" Pressed BUCKETS.

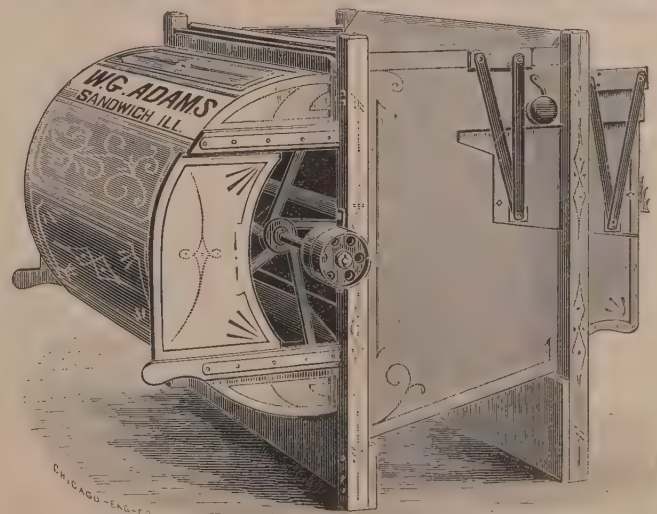
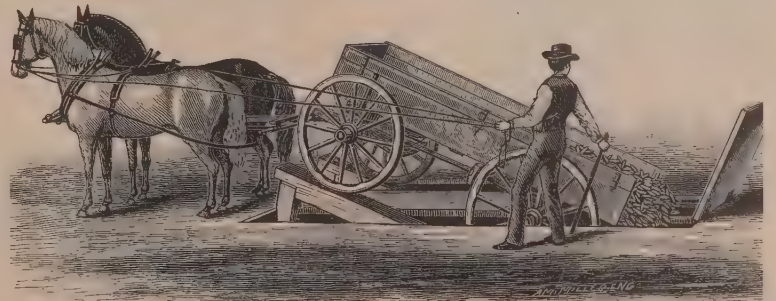


HORSE POWERS

FOR
One, three or four Horses.

Common Rail and Wells DUMPS

Licensed by
J. M. HARPER.

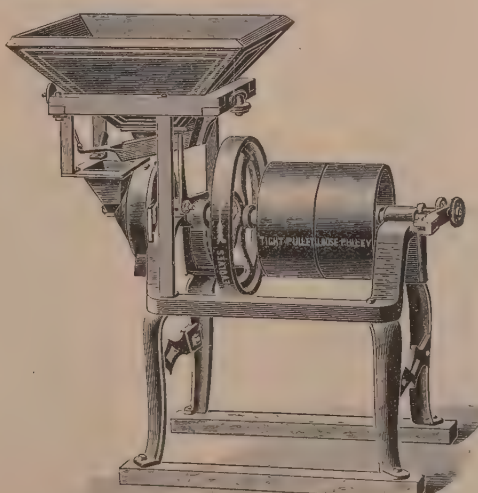


WAREHOUSE FANNING MILL.

CAPACITY, 800 to 1,000 Bushels Corn or Oats per Hour.



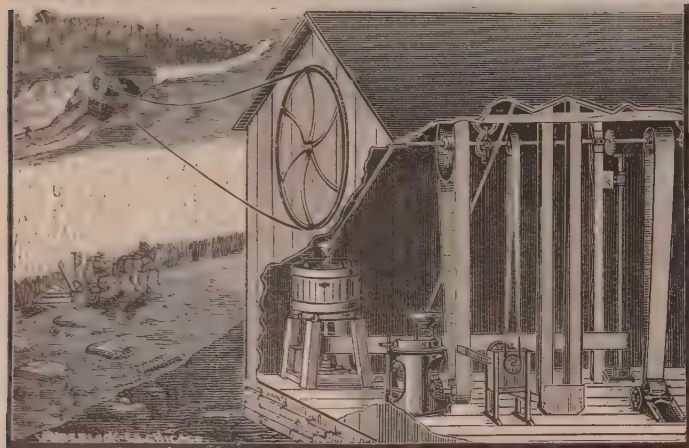
Wood Boots.



ELEVATOR FEED GRINDER.

Capacity, 18 to 20 Bushels per Hour.

WIRE ROPE TRANSMISSIONS!



Portable Mills, Pulleys, Shafting, Etc.
Send for Illustrated Treatise on Wire Rope
Transmissions, and our General Price
and Pattern List.

WILLIAMS & ORTON MFG. CO., { 400 LOCUST STREET, } STERLING, ILL.

IMP. CHICAGO CAR MOVER!

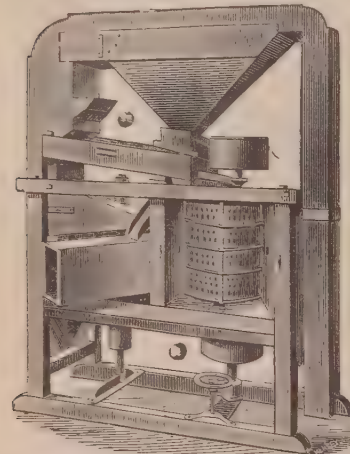
Provided with the Wedge-Shaped Riser.

ALLOWS NO SLIP to our machine, which makes a great IMPROVEMENT. It is now manufactured of Steel or Malleable Iron. Will not break. Light and handy. Cheapest and BEST in the market.

To accommodate my numerous customers and save cost of freight, I constantly keep stock subject to order at Chicago, St. Louis, Kansas City, Minneapolis, Nashville and Buffalo, delivered free. If desired, 30 days' trial allowed. Send for references and prices. Address

CHAS. T. BARNES, 335 West Monroe St., CHICAGO, ILL.

THE TRIMMER GRAIN SCOURER



SEPARATOR!

Should be in Every Elevator in the Land.

CLEANS & POLISHES THE GRAIN,

Removing all impurities without breaking or wasting.

Made Especially for this Trade

—BY—

THOMPSON & CAMPBELL, 1026, 1028 & 1030 Philadelphia, Pa.

(Successors to KREIDER, CAMPBELL & CO.)

SEND FOR CIRCULAR.

BOGARDUS ECCENTRIC MILL

—These Mills are Used for—
Grinding all Kinds of Substances

And having been used for a number of years, are well known in the Trade.

Nos. 2 and 5 Mills Grind the Following Dry Substances:

Raw Bones, Burnt Bones, Pot Shells, Ores, Flint Quartz, Enamel, Old Crucibles, Charcoal, Plaster, Fire Clay, Alumina, Clay, Paints, Guano Feed, Corn, Corn and Cob, Tobacco, Snuff, Sugar, Starch, Salts, Woods, Stems, Berries, Seeds, Leaves, Roots, Coffee, Spices, Mustard, Coconut, Cocoa, Oil Cake, Gums, Tomatoes, Fish, Leather, India Rubber, Mica, Asbestos, Cork, Horn, Celluloid, Beef Fibre, Confectioner's Sugar Chemical Salts, Johnson's Fluid Beef, Fehsen Safety Blasting Powder, etc.

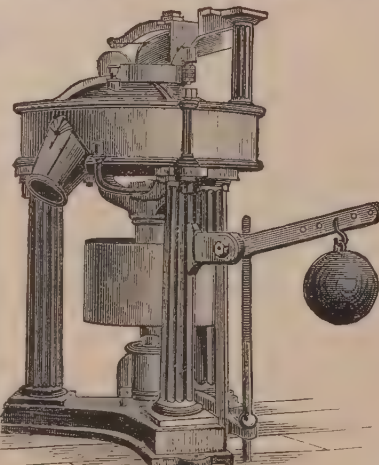
Nos. 3 and 4 for Grinding Wet Substances, Such as Paints in Water, Oil or Varnish Printer's Ink, Paste, Blacking, Starch, and other moist compositions. Many substances above mentioned Cannot be Ground by Other Mills. As the peculiar motion of the plates causes them of themselves to discharge the ground substances, which would choke other mills.

The Mills will do a much larger amount of work than any other Mills in a given time.

For Illustrated Circulars and Descriptive Price List, etc., apply, mentioning AMERICAN ELEVATOR, to the manufacturers.

PRICES GREATLY REDUCED.

J. S. & C. F. SIMPSON, — — — 26 to 36 Rodney St., Brooklyn, E. D., NEW YORK.



CALIFORNIA!

DEAL'S CALIFORNIA

Grain Cleaning Machinery.

We manufacture a complete line of

Cleaners, Scourers and Brush Machines

For Mills and Elevators.

WARRANTED THE BEST IN AMERICA;

The purchaser being the judge after 60 or 90 days trial

We guarantee every machine to give entire satisfaction or no pay. Send for circulars; it will pay you.

M. DEAL & CO.,

Sole Owners and Manufacturers,

BUCYRUS, - - OHIO.



PORTABLE GRAIN MILLS

10,000 Sold Since 1844!

SIMPSON & GAULT MFG. CO.,

CINCINNATI, OHIO,

Flour Mill and Elevator Machinery

OF EVERY KIND. Please Write.

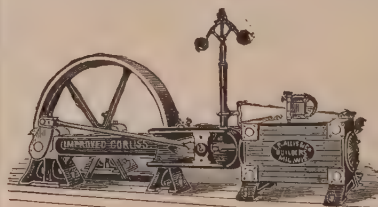
The Gladiator Corn Sheller and Cleaner!

RELIANCE WORKS,

EDW. P. ALLIS & CO., Props., Milwaukee, Wis.

—SOLE MANUFACTURERS OF THE—

REYNOLDS-CORLISS ENGINE!



This engine is especially designed for manufacturing purposes, being strong, serviceable, and of the best material and workmanship. Its even speed makes it especially desirable for flouring mills and elevators.

OVER 250 OF THESE ENGINES ARE NOW IN USE, and references can be given. These engines have been developed in expert trial and every day work THE HIGHEST ECONOMY KNOWN IN STEAM ENGINEERING!

They will save in fuel 33 to 60 per cent. over any ordinary engine.

We also manufacture Reynolds' Patent AIR PUMP and CONDENSER, which can be used with our make of engines, and effect a saving of about 25 per cent. Also REYNOLDS' PATENT FEED WATER HEATER AND PURIFIER. Send for Catalogue and Prices to

EDW. P. ALLIS & CO., Milwaukee, Wis.

J. T. MOULTON.

GEO. M. MOULTON

J. T. MOULTON & SON,

ARCHITECTS, CONTRACTORS AND BUILDERS

OF LARGE ELEVATORS,

OFFICE NO. 1543 SOUTH CLARK ST.,

CHICAGO, : : : : : ILLINOIS

THE COMMON-SENSE

Automatic Corn Sheller.

The only self-adjusting automatic sheller in the market. It possesses more advantages than any other known machine; takes less power to operate; and adjusts itself to the size of Ear Corn. Will shell more corn, and that too, without splitting the cob; leaves little or no corn on the cob; grinds and breaks less of the kernels; is less liable to be broken (by having some hard substance pass through the sheller) on account of the flexibility of segments and safety pins in plate—which are of wood and can easily be replaced; works right or left, as may be required.

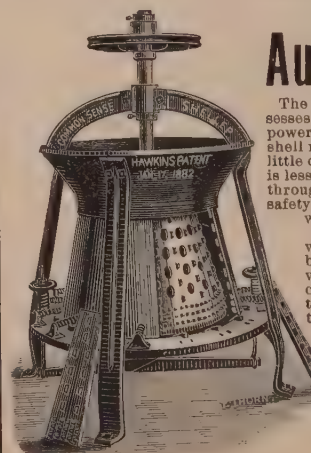
The sheller represented herewith is made entirely of Iron; is well proportioned and built in a most thorough manner; can be adjusted while being operated, by means of the hand-wheel on the rods connected with the lever supporting the center lift. The case and cylinder are both made of segments. The case staves have a spring to hold the bottom close enough to catch any corn which may be on the cob before leaving the machine, the spring yielding to a large cob, also being close enough for the smaller ones.

Six Sizes Made. Send for Prices.

Address H. A. HAWKINS,

248 Randolph Street,

CHICAGO.



A GREAT SAVING IN THE RUNNING OF GRAIN ELEVATORS! THE LOTZ PATENT GRAIN SHOVELING MACHINE, FOR UNLOADING CARS.

PAT. NOVEMBER 23, 1880, AND DECEMBER 14, 1880.
This machine works automatic. The hoist rope spool of each machine is driven from a line shafting by paper friction wheels, and all the mechanical movements in the machine are such that they will not wear, nor get out of order. A GREAT SAVING IN REPAIRS OF SCOOPS, in the WEARING OF ROPES, in LUBRICATING MATERIAL, and in REPAIRS ON MACHINE. The resistance on taking the scoop back into the car is much less than with other automatic machines. The length of pull of hoist rope can be instantly adjusted. The more economical operation of this machine as compared with others will pay its first cost in five years.
Eleven double machines of above construction have been set up and are in practical operation in Rock Island Elevator A, near Twelfth Street Bridge, Chicago, Ill.

Mr. W. M. H. LOTZ, CHICAGO:

DEAR SIR—We have been using your Patent Shovel Machines in Rock Island Elevator A for several months, and are well satisfied with them. We estimate a saving of 50 per cent. on shovels, 75 per cent. on rope, and 60 per cent. on oil over all the Shovels previously used by us. Yours truly,

Office of FLINT, ODELL & CO., 151 Monroe St.,

CHICAGO, MAY 4, 1883.

FLINT, ODELL & CO

For further information address

HOWARD IRON WORKS, Buffalo, N. Y.,
Sole Mfrs for the United States.

or

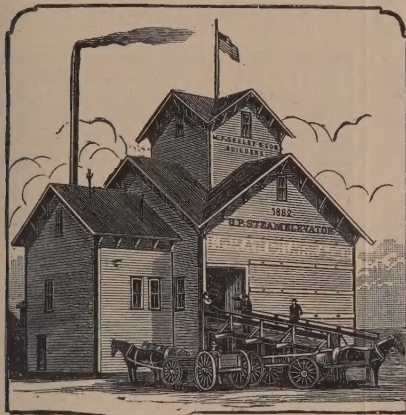
WM. H. LOTZ, Mechanical Engineer
Metropolitan Block, Chicago.

M. F. SEELEY

J. S. SEELEY

E. E. HANKS

C. R. DELAMATYR



SEELEY, SON & CO., Fremont, Neb. Elevator Builders.

We build a "SEELEY" ELEVATOR that stands at the head of Elevators as a self-binder stands at the head of reapers. We furnish

Plans, Specifications and Estimates

Also furnish all kinds of

MACHINERY.

Engines, Cleaners, Corn Shellers, Belts and Buckets, Etc., Etc.

With our experience we can save you on these items more than cost of Plans. Correspond with us and save costly mistakes.

"EVERY FARMER HIS OWN MILLER!"

—THIS CUT ILLUSTRATES OUR—

Union Flour and Feed MILL!

A combination of Iron Discs and French Burr Stone—a grand and late improvement it grinds with two-thirds the power of any other Mill of same size, and does better work than an all-metal grinder. These mills are especially adapted to our Geared Windmill, and can be run by any other kind of power. We furnish a Bolt at a reasonable price when wanted. Write for Circulars.

The Best and most Practical as well as the most Durable Mill made for General Purposes, combining New Features never before shown in Flour and Feed Mills.

We are also Sole Manufacturers for the United States of the
Stover Pumping and Geared Windmills of all sizes, also Hay Loaders, Hay Carriers, Pumps, Pipe and all Water Supplies.

Freeport Machine Co., Freeport, Ill. P. O. Box, 2013.

Write for Circular and Agencies.

THE MILLER'S FRIEND.

VALENTINE'S PATENT Corn Sheller!

This Improved Sheller has been in use several years, and has become the favorite among Millers and Farmers wherever known, giving the most Perfect Satisfaction of any Sheller in use. Having but one rotary shaft, and no cog wheels or extra belts, the friction is reduced to the minimum.

Send for Circular.

Unadilla Machine Works,
UNADILLA, N. Y.

GREAT WESTERN MFG. CO., LEAVENWORTH, KANSAS.

Steam Engines,

PULLEYS,
SHAFTING,
GEARING,

FLOUR MILL

ELEVATOR
MACHINERY

Every Description.



CORN
SHELLERS,
SEPARATORS,
SCALES,
BELTING,
Elevator
Cups,
BOLTING CLOTH,
STEAM PUMPS,
PIPE AND FITTINGS.

We Carry the Largest Stock of Mill and Elevator Supplies to be found West of the Mississippi River.

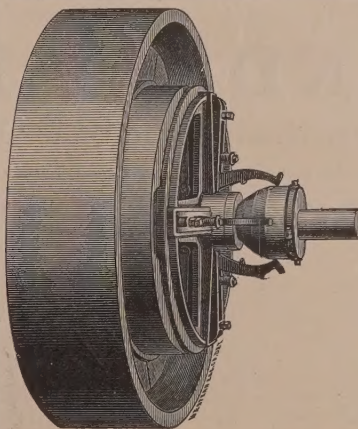
WM. E. BENT,
Architect & Grain Elevator Builder & Contractor
417 OLIVE STREET, ST. LOUIS, MO.

Plans, Specifications and Estimates Furnished on Application. Correspondence Solicited.

E. B. FREEMAN, ARCHITECT AND PRACTICAL BUILDER

Of Stationary Elevators, Floating Elevators, and
Special Grain Cleaning Machinery.

PEORIA, ILL.



FRICTION CLUTCH PULLEYS!

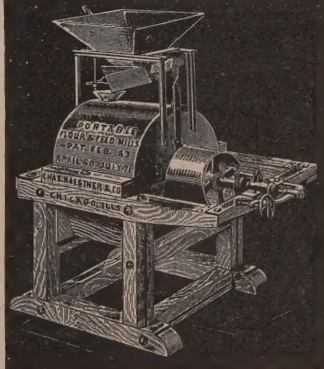
They are Sure, Strong
and Noiseless.

You can start a load with this Clutch, at any speed, with ease and safety.

Also Split Pulleys, Dead Pulleys
And Wood Pulleys Whole.

SEND FOR CIRCULAR.

TAPER SLEEVE PULLEY WORKS,
ERIE, PA.



The King of Portable Grinding Mills. THE KAESTNER PATENT.

Built in Four Sizes, 16, 20, 24 and 30 Inches.
SUITABLE FOR ANY POWER, 2 TO 15 HORSE.

Each Mill Guaranteed to Give Entire Satisfaction, or Money Refunded.

OVER 6,000 IN USE.

Live references in every state and territory. Will grind Wheat, Corn, Rye, Oats, etc. Write for Catalogues, etc

CHAS. KAESTNER & CO.,
Machinists, Founders and Mill Furnishers,
Grain Elevator Machinery a Specialty.

303-311 S. Canal St. - - Chicago, Ill.

Send for
Catalogue
and
Prices.



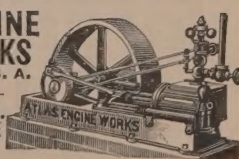
ATLAS ENGINE WORKS

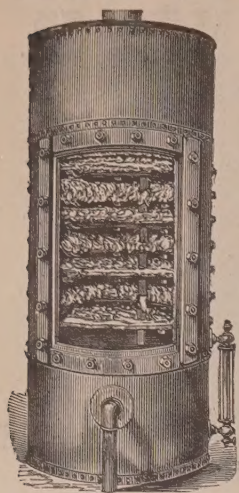
INDIANAPOLIS, IND., U. S. A.

MANUFACTURERS OF

STEAM ENGINES & BOILERS.

Carry Engines and Boilers in Stock for immediate delivery.





STILWELL'S PATENT LIME EXTRACTING HEATER

AND FILTER COMBINED.

Is the only Lime Extracting Heater that will Prevent Scale in Steam Boilers, removing all Impurities from the water before it enters the Boiler.

THOROUGHLY TESTED. OVER 3,000 OF THEM IN DAILY USE!

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary Lime Water, when the door was removed after the Heater had been running two weeks.

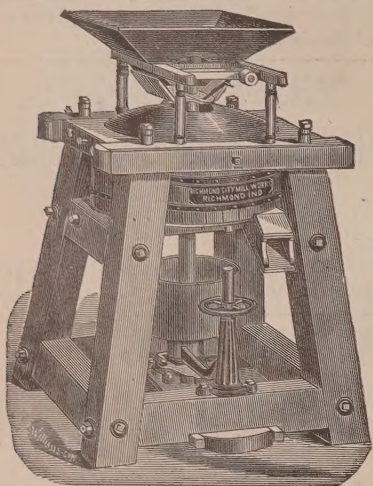
ILLUSTRATED CATALOGUE FREE!

A LARGE NUMBER OF MINES HAVE THEM IN SUCCESSFUL OPERATION

STILWELL & BIERCE MFG. CO.,

DAYTON,

OHIO, U. S. A.



RICHMOND CITY MILL WORKS

RICHMOND, INDIANA,

Manufacturers of

IMPROVED MILLING MACHINERY

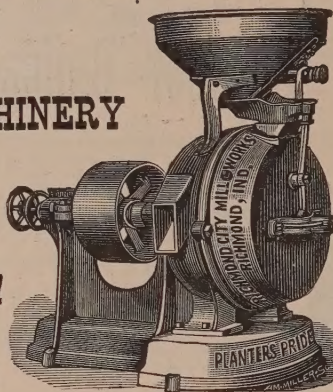
PORTABLE MILLS

Of Every Description,

THE BEST MADE!

— < X > —

Write for Description and Prices.



M. HALLIDAY,

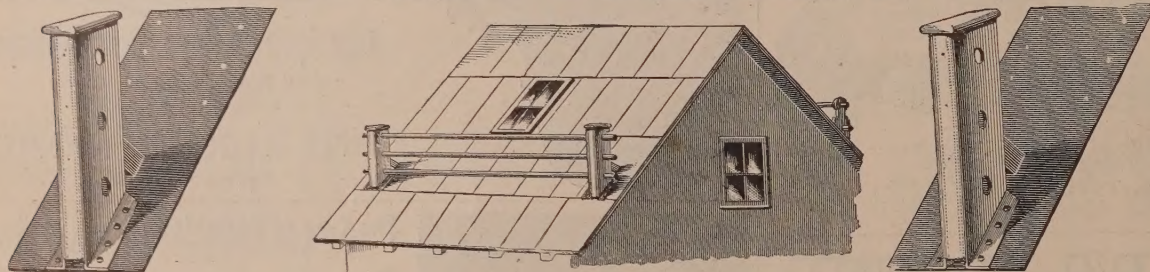
Sole Proprietor and Manufacturer of *Dugan's Patent*

SLATE AND STANDARDS!

For Snow Guards and Other Purposes.

— ATTACHABLE TO EVERY DESCRIPTION OF —

SLATE and Other SLANTING ROOFS.



The above Cuts represent the Standards, with Slate or Shingles attached, complete and ready to receive the pipe or bar for a snow guard. The Iron Slate forms one of the course of slates or shingles *Screwed* to the roof planks, thus doing away with the cutting or fitting of the slate and flashing or puttying around the standard, as in the old method. In this method your Standard, with the slate attached, is as complete as any other slate placed on the roof. The center cut shows how the bars are placed in position. The Iron Slates are placed five feet apart at the eaves, or in any other position on the roof and can be made as *ornamental* as desired, so as to form a balustrade or safety guard, or for supports for signs or other structures on pitched roofs, being always perfectly water or snow tight.

The Slate, with the Standard, is simple in application, being as easily placed on an old as upon a new roof, by simply removing one of the course of slates or shingles and replacing it with the Iron Slate, which answers for a slate and support at the same time. The Standards are made of wrought iron and galvanized.

PATENT Iron Slate for WOOD or IRON LATH roof, with FLANGE TOP. Ornamental Standards according to the designs of Architect made to order at the lowest prices.

In ordering the Patent Slate and Standard, state the size and thickness required, and give exact angle of the roof. All Slates being made to order, and the proprietor being the sole manufacturer, the strength of each can be relied upon.

M. HALLIDAY, Sole Proprietor and Manufacturer, - 218 E. Ninth St., NEW YORK CITY.

SEEDS

OUR ILLUSTRATED CATALOGUE FOR 1885, OF
"EVERYTHING FOR THE GARDEN,"

full of valuable cultural directions, containing three colored plates, and embracing everything *new* and *rare* in **Seeds** and **Plants**, will be mailed on receipt of stamps to cover postage (6 cents). To customers of last season sent free without application.

PETER HENDERSON & CO.,
35 & 37 CORTLANDT STREET, NEW YORK.

PLANTS



\$50 REWARD
will be paid for any Grain Fan of same size that can clean and bag as much Grain or Seed in one day as our Patent **MONARCH** Grain and Seed Separator and Bagger, which we offer to the public at a low price. Send for circular and price list, which will be mailed FREE. **NEWARK MACHINE CO.** Columbus, Ohio, U. S. A.

DETROIT LUBRICATOR CO'S

PATENT SIGHT FEED

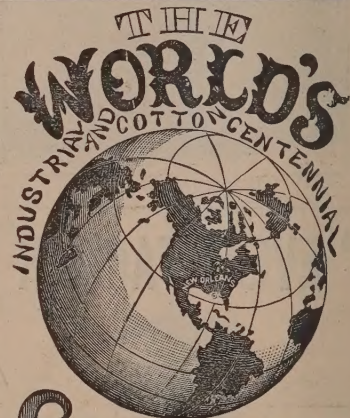
Lubricator Cups

For oiling valves and cylinders of steam engines, by the only perfect method, **Through the Steam Pipe.** The oil passes in Sight, drop by drop, into the column of steam, where it atomizes, thus becoming a STEAM LUBRICANT, oiling perfectly every part reached by the steam. Saves from 50 to 90 per cent. in oil and wear of machinery, thus paying for itself several times a year. A cup will be sent to responsible parties on 20 days' trial if desired.

We refer to more than 10,000 firms using them.

Address, **DETROIT LUBRICATOR CO.,**
Office, 129 Griswold St., DETROIT, MICH.

ENGRAVING DIRECT FROM PHOTOGRAPH.
NO DRAWING REQUIRED.
NO HAND WORK NECESSARY.
SEND { **CHEAP, ARTISTIC.**
FOR { **CROSSCUP & WEST ENG. CO.**
PARTICULARS { 702 CHESTNUT ST. PHILA. PA.



Exposition
New Orleans.

Opening December 1, 1884; Closing May 31, 1885.

— UNDER THE AUSPICES OF THE —
United States Government.

\$1,300,000,

Appropriated by the General Government.

\$500,000,

Contributed by the Citizens of New Orleans.

\$200,000,

Appropriated by Mexico.

\$100,000,

Appropriated by the State of Louisiana.

\$100,000,

Appropriated by the City of New Orleans.

From \$5000 to \$25,000,

Appropriated by Innumerable States, Cities, and Foreign Countries.

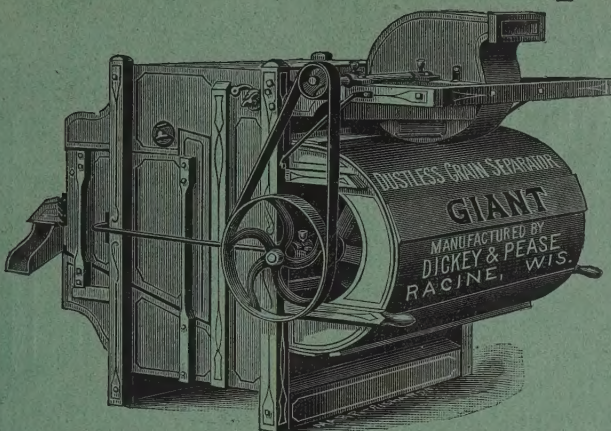
Every State and Territory in the Union represented, and nearly all the Leading Nations and Countries of the World.

The Biggest Exhibit, the Biggest Building and the Biggest Industrial Event in the World's History.

APPLICATIONS FOR EXHIBITS ALREADY RECEIVED COVER MORE SPACE AND A GREATER VARIETY OF SUBJECTS THAN THOSE OF ANY EXPOSITION EVER HELD.

The cheapest rates of travel ever known in the annals of transportation secured for the people everywhere.
For information, address
E. A. BURKE,
Director General, W. I. & C. C. R.,
NEW ORLEANS, LA.

'Giant' Dustless GRAIN Separator



We claim for the "Giant" Superiority over all other Separators for the following strong reasons:

1st.—It is simple in its construction, Strong and Durable. Any one competent to run a fanning mill can operate the "Giant."

2d.—The height from the floor to the top of the receiving hopper is but 4 feet 3 inches, hence it will accommodate spouts from different points the same as a fanning mill, that is without being obliged to move the machine.

3d.—The cost is not much over one-half that of

any other Separator that will do the same work.

4th.—This machine will clean and screen better and faster than any other Separator made, sizes being equal. Every Separator GUARANTEED to give satisfaction.

SENT ON APPROVAL TO ANY RELIABLE PARTY.

For Descriptive Circulars and Prices address

DICKEY & PEASE, - - SOLE MANUFACTURERS, RACINE, WIS.

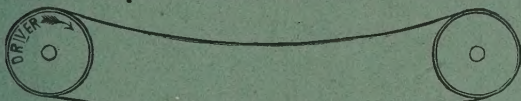
H. CHANNON & CO.,



Of the Finest English CRUCIBLE STEEL, and Best Selected CHARCOAL IRON.

FOR EVERY PURPOSE.

Wire Rope Transmission! Rubber Packed Wheels!



Our WIRE ROPE BELTS are Spliced with Channon's Patent Splice, which for NEATNESS, STRENGTH, and DURABILITY far exceeds any other.

HORSE AND WAGON RAIN-PROOF COVERS



White Canvas Covers.

FLAGS!

Oiled Clothing!

FISH NETS,

CORDAGE

Etc., Etc.

210 to 216 S. Water St., Chicago, Ill.

Circulars and any Information Sent on Application.

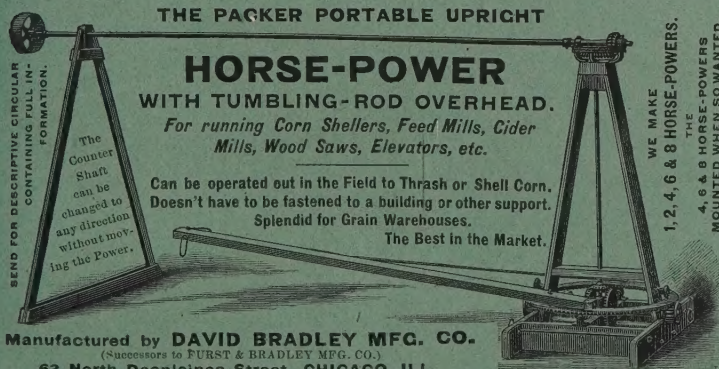
THE PACKER PORTABLE UPRIGHT

HORSE-POWER WITH TUMBLING-ROD OVERHEAD.

For running Corn Shellers, Feed Mills, Cider Mills, Wood Saws, Elevators, etc.

Can be operated out in the Field to Thrash or Shell Corn. Doesn't have to be fastened to a building or other support. Splendid for Grain Warehouses.

The Best in the Market.



Manufactured by **DAVID BRADLEY MFG. CO.**
(Successors to FURST & BRADLEY MFG. CO.)
63 North Desplaines Street, CHICAGO, ILL.

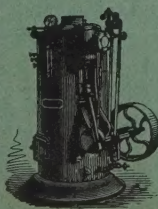
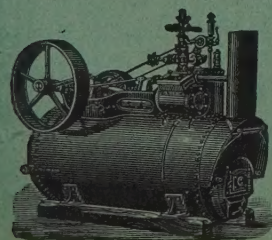
BOOKWALTER ENGINES.

UPRIGHT ENGINES: 3 Horse, 4½ Horse, 6½ Horse and 8½ Horse Power. Safe, Simple and Durable. Over 3,000 in successful operation.

New Style 10 H. P. Horizontal Engine. Center Crank Engine. All wrought iron Return Flue Boiler, Compact, Substantial and handsomely finished. Illustrated Pamphlet sent free. Address

JAMES LEFFEL & CO.,
SPRINGFIELD, OHIO.

Eastern Office: 110 Liberty St., New York.



HILL GRAIN-SCALE COMP'Y,

DETROIT, MICHIGAN,

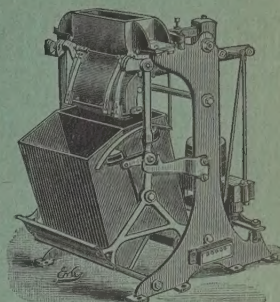
—MANUFACTURERS OF—

Automatic Grain Scales,

ACCURATELY WEIGHING AND REGISTERING

ANY SPOUTED MATERIAL IN

Flour Mills, Elevators, Breweries
Distilleries, Malt Houses, Oil Mills,
Rice Mills, Starch Factories, etc.



BRANCH OFFICES:

In New York, Boston, Chicago, Cincinnati, St. Louis.
In Baltimore, Denver, Atlanta, San Francisco, Montreal.

Send for Illustrated and Descriptive Catalogue.

KNISELY & MILLER,

129 & 131 South Clinton St, CHICAGO,

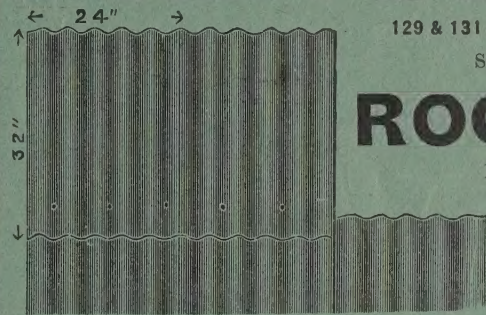
Slate, Tin and Iron

ROOFERS!

Manufacturers of

CORRUGATED IRON

For Roofing And Siding.



This cut shows our method of fastening Corrugated iron to Elevator Bins to allow for settling and raising.

UNION FOUNDRY

AND PULLMAN CAR WHEEL WORKS,

—Manufacture all Kinds of—

ELEVATOR MACHINERY, STEAM SHOVELS,

Buckets, Building Materials,

And all Iron Work used in Elevators. Dealers in PAPER FRICTION PULLEYS. Correspondence Solicited and Estimates Furnished.

WORKS: PULLMAN, ILL. — OFFICE: FIRST NATIONAL BANK BLDG, CHICAGO, ILL.

THE LARGEST MANUFACTURERS

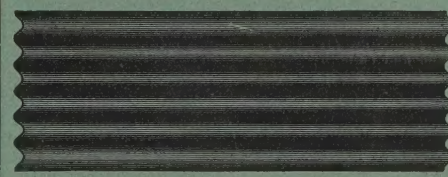
OF

SHEET IRON

ROOFING



Sheet Iron Roofing.



Corrugated Iron Siding and Roofing.



Corrugated Iron Ceiling.

In the United States.

Used on All Kinds of Buildings.

In use in every State and Territory.

Send for Descriptive Circular and Testimonials.

PORTER IRON ROOFING CO.,

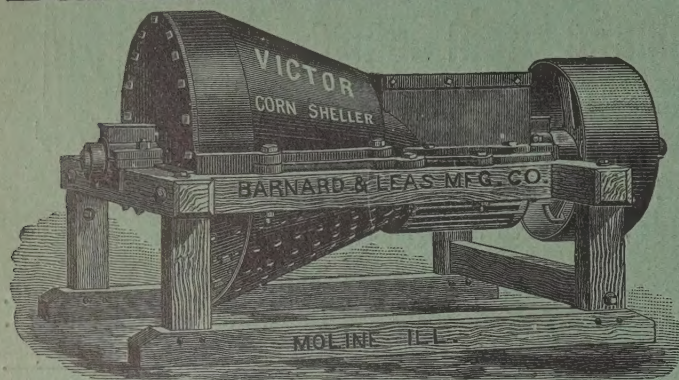
101, 103 and 105 West Front St., CINCINNATI, OHIO.

All Orders sent to FAVORITE STOVE WORKS CO. for PORTER IRON ROOFING CO., will receive prompt attention.

BARNARD & LEAS MFG CO., Moline, Ill.,

MANUFACTURERS OF

Barnard's Dustless Warehouse Separator,



W.D. EWART, Pres't

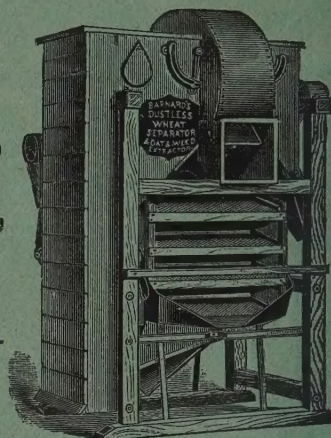
BARNARD'S DUSTLESS ELEVATOR SEPARATOR,

Duplex Separator and Grader,

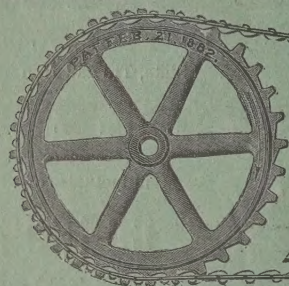
Victor Corn Sheller, Barnard's Dustless Corn Cleaner,
Victor Lengthened Scourer.

The Latest and Best Machines Made for Warehouse Purposes.

SEND FOR CIRCULARS.



E. A. TURNER, Secy & Treas.



F. I. PEARCE,
Vice Pres't & Supt

LINK-BELT MACHINERY COMPANY,

MANUFACTURERS OF
IMPROVED
ELEVATORS, CONVEYORS, DRIVING BELTS.

EMPLOYING THE EWART DETACHABLE LINK-BELTING

MILL MACHINERY.

OFFICE AND WORKS NOS 11 to 23 So. JEFFERSON ST.

BRANCHES:
NEW YORK. No 81 JOHN ST.
ST. LOUIS. No 921 No. 24 ST.

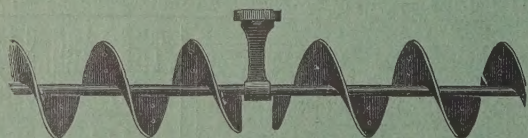
We Manufacture and Carry in Stock a Complete Line of

Chicago

Pulleys, Shafting, Hangers, Pillow Blocks, &c.

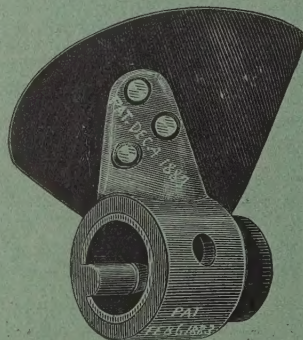
SPIRAL CONVEYORS!

PERFORATED SHEET METALS

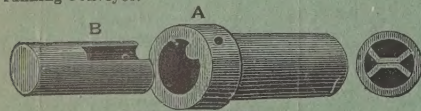


Patented April 17th, 1883.

The Webster & Comstock Patent Backbone Steel Conveyor is the BEST for the following reasons: ALL WEARING PARTS are STEEL; only the best material is used, and only skilled and experienced workmen are employed in its construction. Steel, as is well known, possesses much greater wearing qualities than iron. It is also a stiffer material, rendering the flights less liable to bend back and break off when subjected to a heavy strain. The steel also takes a high polish, making less friction in running through the grain. Our flights are all stamped out with dies, thus insuring a true and smooth running Conveyor.

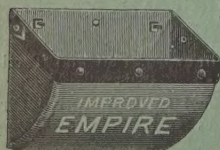


DRIVING ENDS.



PAT. D. FEB. 6, '83.

COUPLING.—Our Coupling has points of advantage over any Conveyor Coupling in the market. The collar into which the Coupling fits is made of steel, and has, on its inner side, a feather, "A," which fits into the slot "B," in coupling, thus relieving the shaft of all twisting strain.



On all Driving Ends and every alternate coupling we furnish our improved Patent Steel Collar and Lug, made in one piece. As the greatest strain is always on the driving end, this improvement will be appreciated by all users of Spiral Conveyors.

OTHER SPECIALTIES.

"Common Sense" and "Empire" Buckets, Elevator Bolts, Steel Grain Scoops, Mosher Patent Bag Holder, Elevator Turn Heads, Elevator Boots, "Power" Grain Shovel, Lenox Car Loader, Bolt Buckles, Car Starters, etc.

—Send for Catalogue. Address—

WEBSTER & COMSTOCK MFG. CO.

125 and 127 Ontario St., CHICAGO.



For all Kinds of

GRAIN-CLEANING MACHINERY,

Elevators, Warehouses, Flour and Rice Mills, Cotton and Linseed Oil Mills, Etc., Etc.; Iron and Zinc for Rolling Screens, Corn Screens, Grain Dryers, Perforated Floors, for Kilns, used in Drying Oats, Corn, Fruit, etc. Smut Mill Jackets of all kinds and sizes made to order. We will renew your Sieves for Oat Separators, Receiving Riddles, Corn Screens, etc., at short notice.

Samples and Prices on Application.

THE HARRINGTON & KING PERFORATING CO.,

BRANCH OFFICE
100 Beekman St., New York.

Nos. 43 to 51 South Jefferson St., CHICAGO.

Crowl's Pat. Iron Roofing.

CORRUGATED IRON SIDING

The only double capped Corrugated Roofing, and the only one prepared by the manufacturers ready for laying.

CORRUGATED EDGE ROOFING.

AGENTS WANTED EVERYWHERE.

CAMBRIDGE ROOFING CO., - CAMBRIDGE, OHIO.

Send for Illustrated Catalogue and Price List.

These goods will be exhibited at the New Orleans Exhibition